



Service Manual

ORDER NO.
RRV1377

FM/AM DIGITAL SYNTHESIZER TUNER

F-C5RDS

FM/AM TUNER

F-C3

- Refer to the service manual RRV1108 for F-C5RDS/HE and RRV1049 for F-C3/HE.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	The voltage can be converted by the following method.
	F-C5RDS	F-C3		
HE8	O	O	AC220-230V	AC240V, *
HEWZI8	O	O	AC220-230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	$\rightarrow 56 \times 10^1 \rightarrow 561$	RD1/8PM 561J
47kΩ	$\rightarrow 47 \times 10^3 \rightarrow 473$	RD1/4PS 473J
0.5Ω	$\rightarrow 0R5$	RN2H 0R5K
1Ω	$\rightarrow 010$	RSIP 010K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	$\rightarrow 562 \times 10^3 \rightarrow 5621$	RN1/4PC 5621F
--------	--	---------------

1. CONTRAST OF F-C5RDS/HE8 AND F-C5RDS/HE

F-C5RDS/HE8 and F-C5RDS/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C5RDS/HE	F-C5RDS/HE8	
Δ	Tuner assy	AWE7007	AWE7006*	
	Tuner assy	AWZ7272	AWZ7271*	
	Power assy	AWZ7275	AWZ7274*	
	Rear panel	ANC7095	ANC7297	
	Ferrite core	Not used	ATX7001*	
	Screw	Not used	ABA1047*	
	Plate (GND)	Not used	ANK1120*	
NSP	FM antenna	ADH1005	ADH1002	

Note : Parts marked * are the same as those of F-C5RDS/HEWZI which is shown with F-C5RDS in the service manual RRV1108.

2. CONTRAST OF F-C5RDS/HEWZI8 AND F-C5RDS/HEWZI

Although F-C5RDS/HEWZI8 and F-C5RDS/HEWZI are different in model name, they consist of the same components.

P.S

F-C5RDS/HEWZI8 is made a design change like the following:

Mark	Description	OLD	NEW
Δ	Ferrite core	ATX7001	Not used
	Ferrite core	Not used	ATX7001

Power assy (AWZ7274) is made a design change like the following:

Mark	Description	OLD	NEW
Δ	C601	ACG1002 (0.01μF/400V)	ACG7020 (0.01μF/250V)

Tuner assy (AWZ7271) is made a design change like the following:

Mark	Description	OLD	NEW
Δ	C559	CKDYB102K50	Not used
	C559	Not used	CKDYB102K50

3. CONTRAST OF F-C3/HE8 AND F-C3/HE

F-C3/HE8 and F-C3/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HE8	
NSP	Tuner assy	AWE7002	AWE7019	
	Main assy	AWZ7048	AWZ8214*	
	Rear panel	ANC7058	ANC7296	
	Screw	Not used	ABA1047	
	Spacer	AEC1236	Not used	
	FM antenna	ADH1005	ADH1002	

Note * :Refer to 2. PCB PARTS LIST and 3. SCHEMATIC AND PCB DIAGRAMS.

4. CONTRAST OF F-C3/HEWZI8 AND F-C3/HEWZI

F-C3/HEWZI8 and F-C3/HEWZI have the same construction except for the following:

Mark	Symbol & Description	F-C3/HEWZI	F-C3/HEWZI8
△	Fuse (FU2, T2A/250V)	Not used	AEK - 511*

Note * :Refer to 3. SCHEMATIC AND PCB DIAGRAMS.

P.S

Main assy (AWZ7049) is made a design change like the following:

Mark	Description	OLD	NEW
△	C309	ACG1002 (0.01μF/400V)	ACG7020 (0.01μF/250V)
	L301	ATF 1135	Not used
△	L301	Not used	ATF1135
	C1	CKDYX103M25	Not used
△	C1	Not used	CKDYX103M25

2. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10¹ → 561 RD1/8PM 5|6|7J

47kΩ → 47 × 10³ → 473 RD1/4PS 4|7|3J

0.5Ω → 0R5 RN2H 0|R|5K

1Ω → 010 RS1P 0|1|0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10³ → 5621 RNI/4PC 5|6|2|7F

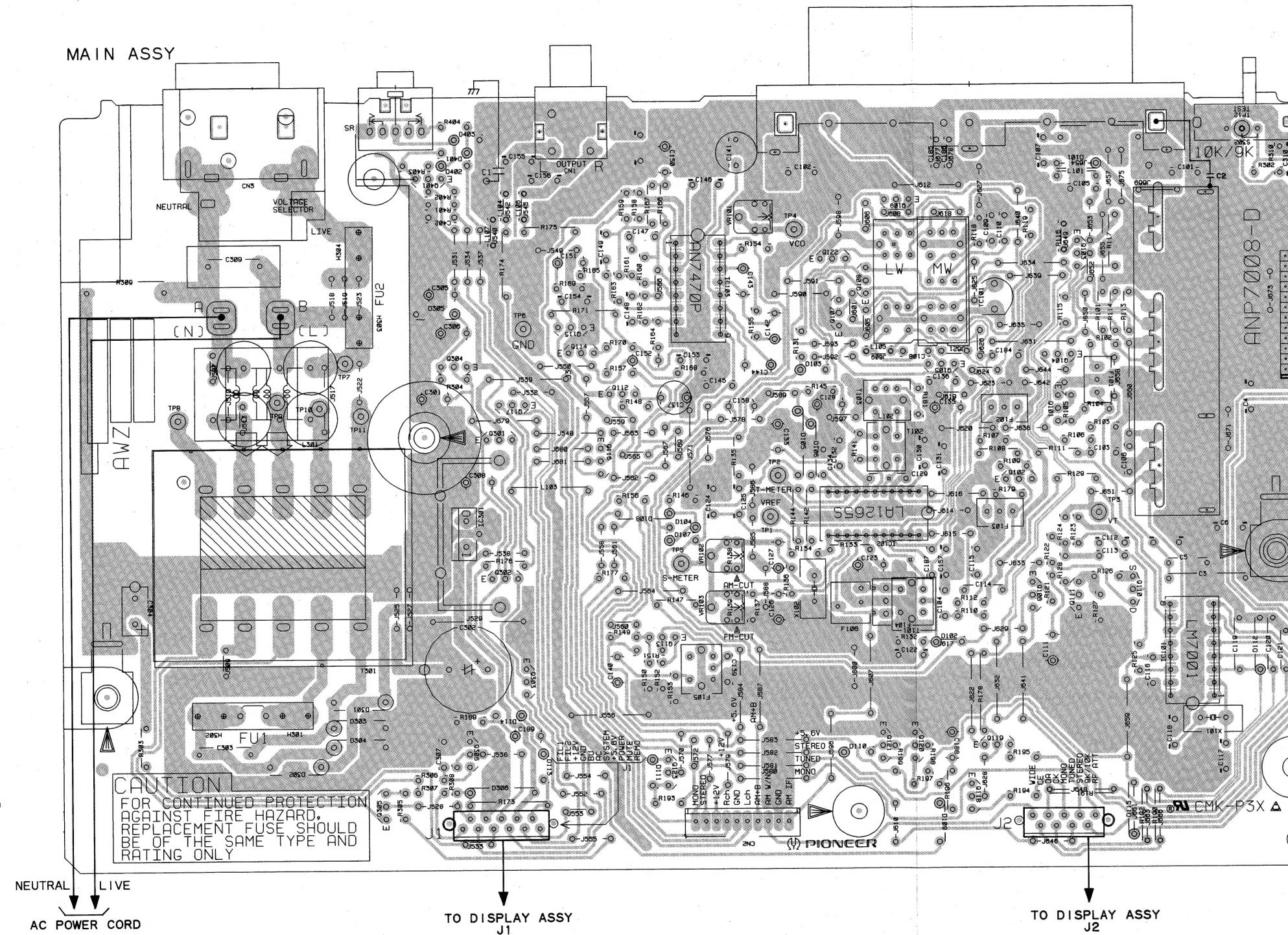
Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
MAIN ASSY (AWZ8214)					
SEMICONDUCTORS					
IC103 IC102 IC101 IC301 Q301 Q103, Q112 – Q115, Q117 – Q119					
	AN7470P LA126SS LM7001J NJM7812AS 2SA1529 2SC1740S	Q305, Q401 Q111 Q101, Q102 Q304 Q110 Q104, Q106, Q108 Q116, Q302 Q105, Q107, Q109, Q122, Q303 Q306	2SC1740S 2SC1740SLN 2SC2668 2SD438 2SK246 XDA124ES XDA143ES XDC143ES XDC143ES		

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
D102 – D108, D113, D114, D306 D401, D402 D101 D112, D305, D403 D301 – D304		1SS252 1SS252 1SV156 RD6.2ESB S5566	C103, C104, C106, C113, C114 C116, C129, C136, C145 C148, C149 C141		CKPUYY103M16 CKPUYY103M16 CQMA102J50 CQPA471J100
COILS AND FILTERS					
L102 F103 F101, F102 F104 F105		ATE – 079 ATF – 107 ATF – 119 ATF – 208 ATF1088	R117 VR101 VR102 VR103	(4.7kΩ) (10kΩ) (22kΩ) Other Resistors	RD1/2PM681J ACP1042 ACP1043 ACP1044 RD1/8PM□□□J
TRANSFORMERS					
△ L301 (180μH, AC250V) L101 L103, L104, L106 L107		ATF1135 LAU2R2J LAU2R2K LAU330J	CN1 CN8220 CN3	SCREW ANTENNA TERMINAL 2 – P PIN JACK(2P) JACK AC SOCKET 1 – P	ABA1012 AKA1012 AKB1146 AKN – 209 AKP1034
CAPACITORS					
△ C303 (0.047μF, 25V) C309 (10000PF, AC250V) C304 C109, C117, C118 C187		ACG – 009 ACG7020 ACH1246 CCDCH150J50 CCPUSL270J50	X101	CRYSTAL RESONATOR	ASS1042
C115 C138 C133 C127 C128, C137, C301		CCPUSL470J50 CEANP4R7M50 CEAS010M50 CEAS100M50 CEAS101M16	X102	CERAMIC RESONATOR AM RF TUNING BLOCK 4 SERIAL F.E. MODULE ASSY	ATF1027 AXX1026 AXQ1004
C143 C189 C302 C126, C151, C152 C111		CEAS1R5M50 CEAS220M25 CEAS222M35 CEAS2R2M50 CEAS330M16			Note: 4 serial F.E. module assy has no servise part.
C142 C135, C150, C305, C306 C123, C140 C144 C308		CEAS3R3M50 CEAS470M10 CEAS4R7M50 CEASR22M50 CEHAQ330M16			
C112 C105, C107 C139 C124 C155, C156		CFTXA224J50 CKDYB103K50 CKDYB122K50 CKDYB222K50 CKDYB332K50			
△ C132 C122, C130, C131, C4 C1 C110, C125, C146 C185, C307, C402		CKDYF103Z50 CKDYF223Z50 CKDYX103M25 CKDYX473M25 CKPUYB101K50			
C101, C102, C186 C147 C134 C184 C108		CKPUYB102K50 CKPUYB121K50 CKPUYB331K50 CKPUYF223Z25 CKPUYF473Z16			

3. SCHEMATIC AND PCB DIAGRAMS

● This diagram is viewed from the mounted parts side.

A



NOTE FOR PCB DIAGRAMS:

- Part numbers in PCB diagrams match those in the schematic diagrams.
- A comparison between the main parts of PCB and schematic diagrams is shown below.

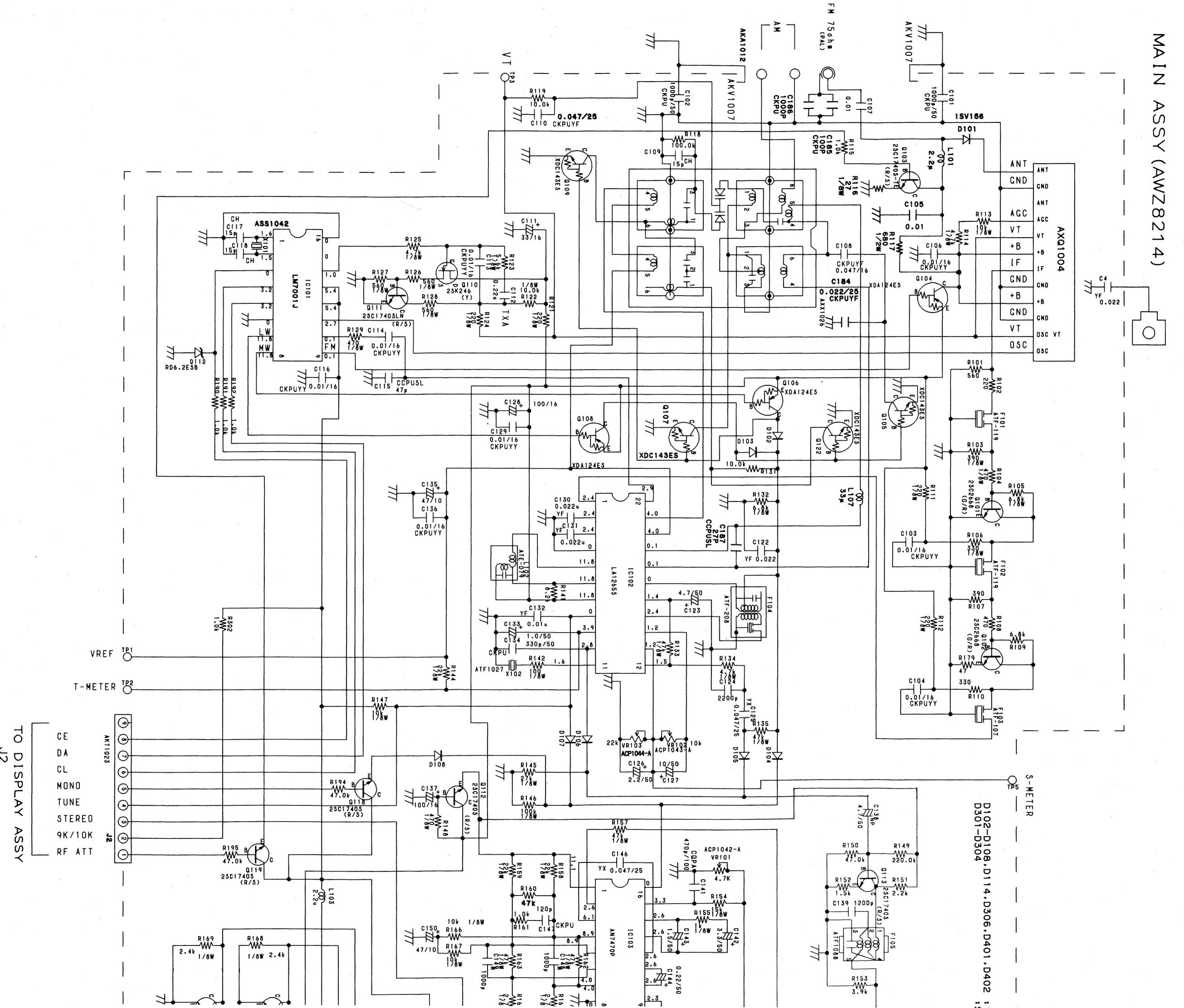
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 E o o Q504	Q504 Q504	Transistor
D203 D203	D203 D203	Diode
C513 C513	C513 C513	Capacitor (Polarized)

- The transistor terminal marked with E or E shows the emitter.
- The diode terminal marked with o or C shows cathode side.
- The capacitor terminal marked with o or L shows negative terminal.

- The parts mounted on each PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

D

MAIN ASSY (AWZ8214)



NOTE FOR SCHEMATIC DIAGRAMS (Type 3A)

- When ordering service parts, be sure to refer to "PARTS LIST" of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. **RESISTORS:**

Unit: kΩ, M:MQ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.

Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. **CAPACITORS:**

Unit: pF or μF unless otherwise noted.
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.

5. **COILS:**

Unit: mH or μH unless otherwise noted.

6. **VOLTAGE AND CURRENT:**

$\frac{mV}{mV}$: Signal voltage at FM 1kHz, 100% MOD.

DC voltage (V) at no input signal unless otherwise noted.

\triangleq mA or \leftarrow mA : DC current at no input signal unless otherwise noted.

7. **OTHERS:**

• \odot or \bullet : Adjusting point.

• The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. **SCH-□ ON THE SCHEMATIC DIAGRAM:**

• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. **SWITCHES** (Underline indicates switch position):

S201 : POWER (STANDBY/ON)

S202 : MEMORY

S203 : RF ATT

S204 : MONO

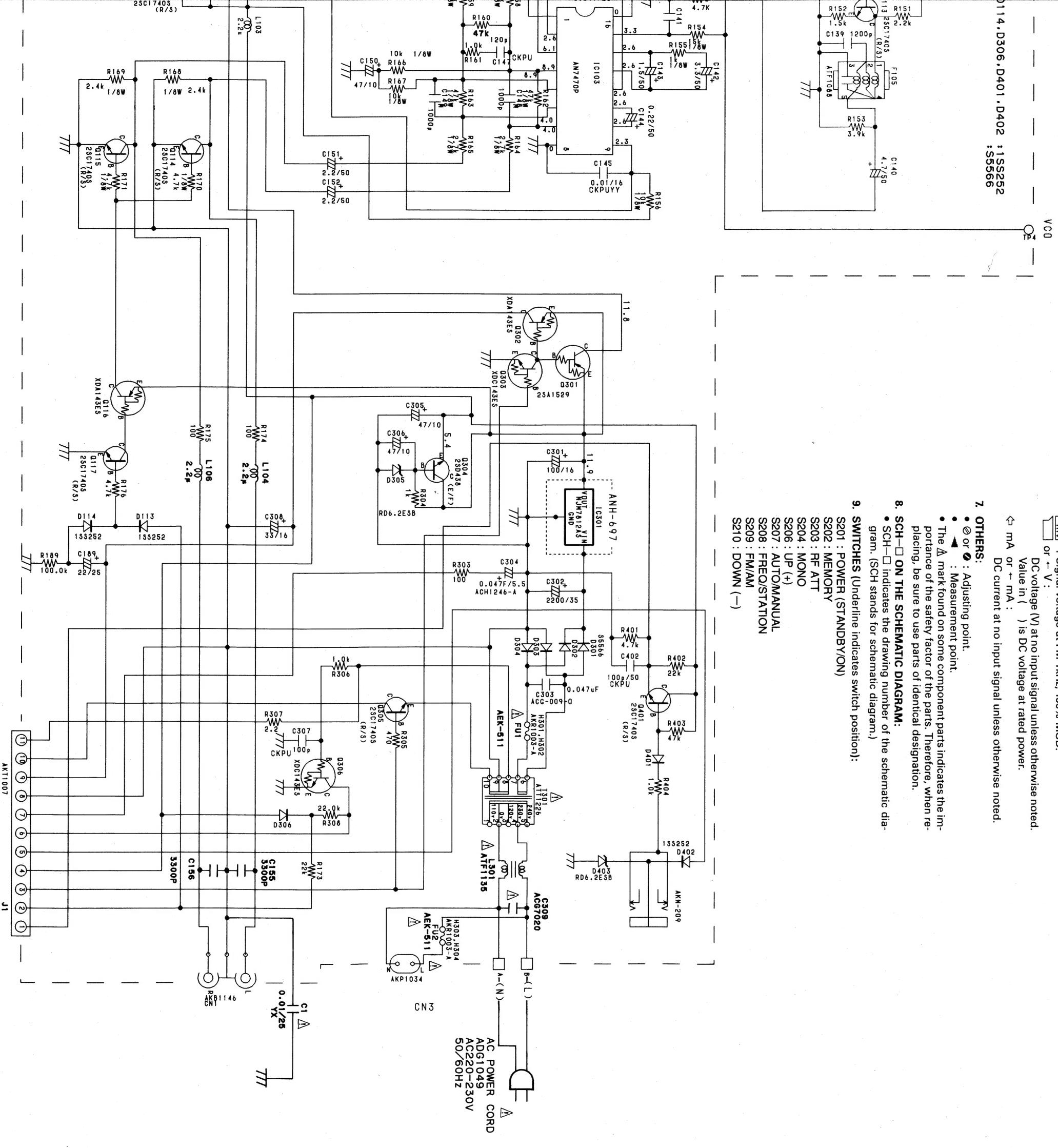
S206 : UP (+)

S207 : AUTOMANUAL

S208 : FREQSTATION

S209 : FM/AM

S210 : DOWN (-)

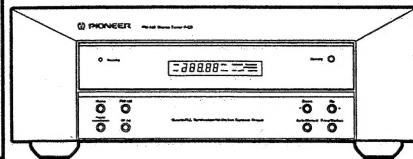


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Service Manual



ORDER NO.
RRV1049

FM/AM TUNER **F-C3**

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	F-C3		
KU	○	AC120V	—
HE	○	AC220-230V	AC240V, *
HB	○	AC240V	AC220-230V, *
HEWZI	○	AC220-230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

- For HEWZI and HB types, refer to page 25.

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O-FFO JAN. 1994 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed, metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

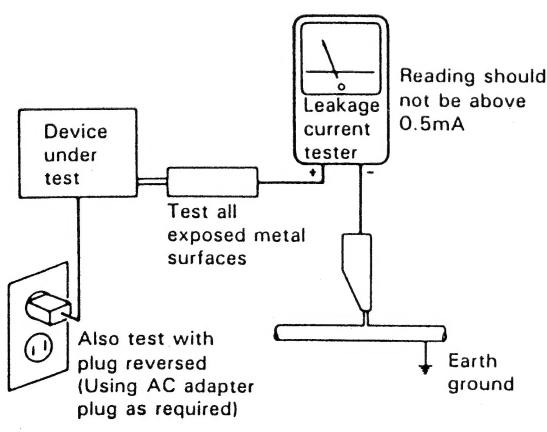
2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.



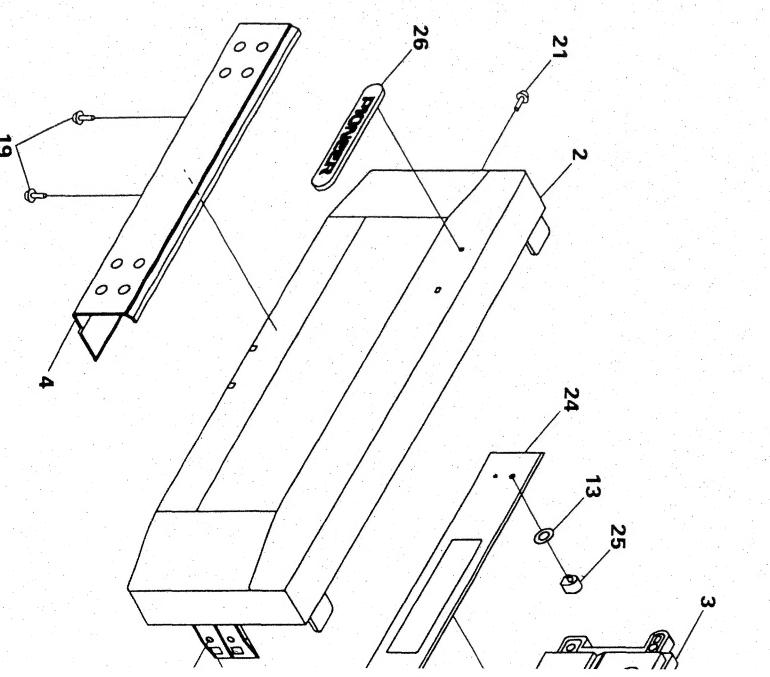
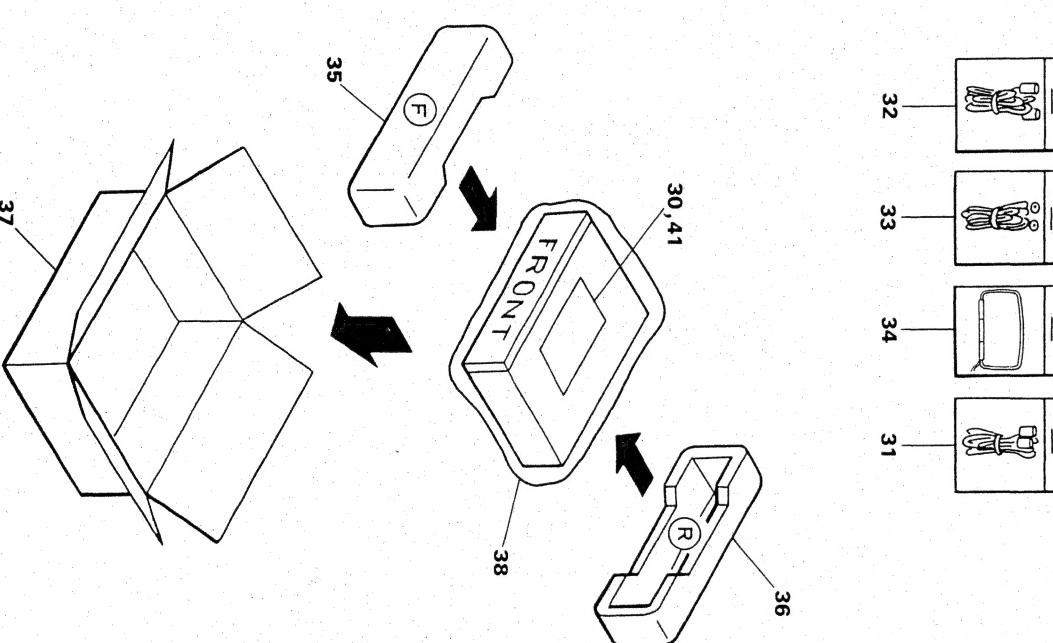
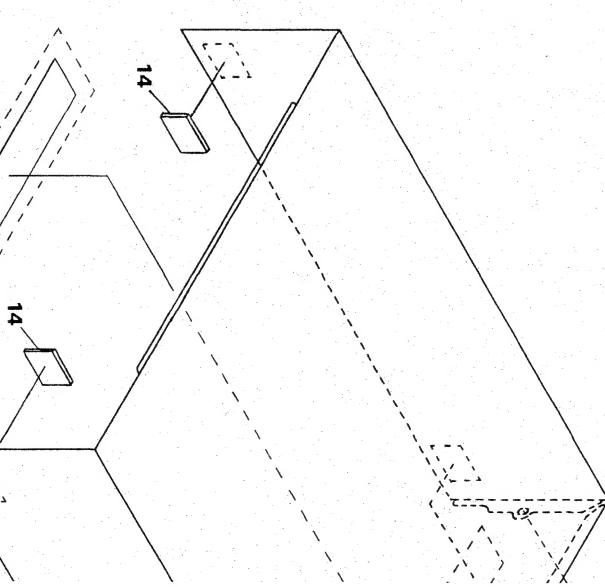
2. EXPLODED VIEWS, PACKING AND PARTS LIST

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- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
 - **Parts List (FOR F-C3/KU and HE)**

1 3 - SERIAL F.E. MODULE ASSEMBLY AXQ1003
36 R.PAD AHA7011



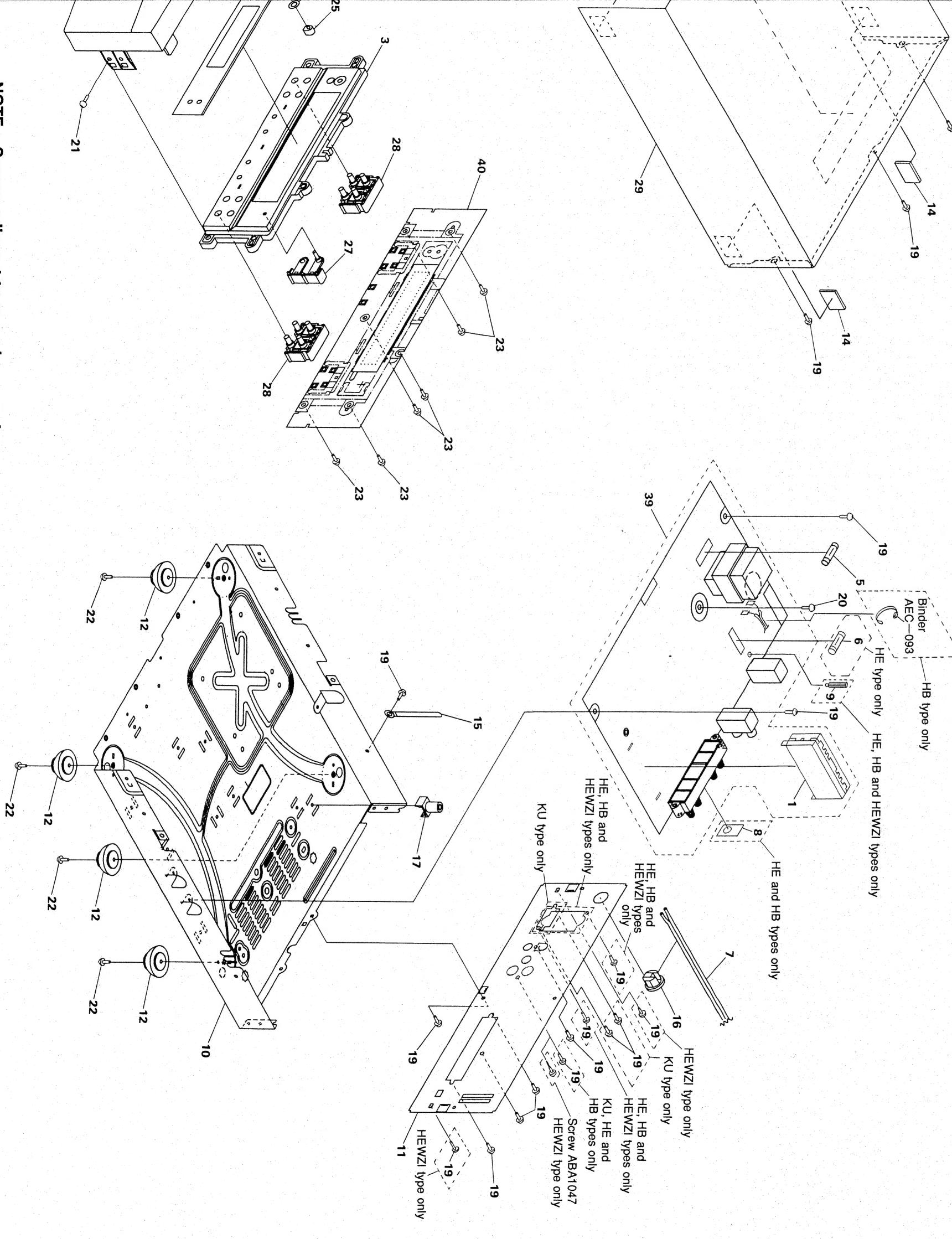
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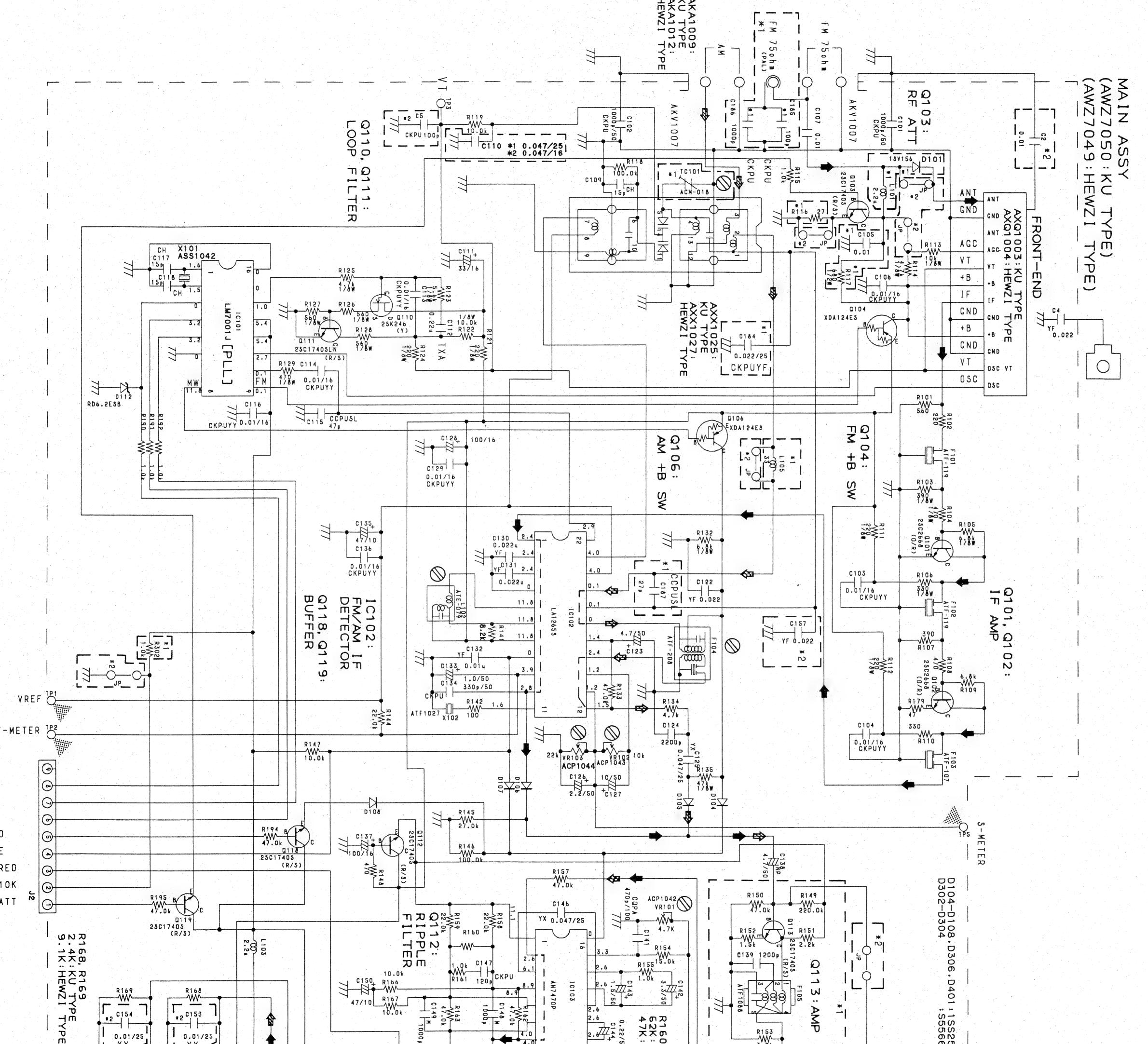
2

NOTE: Screws adjacent to ▼ mark on product
are used for disassembly.



3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

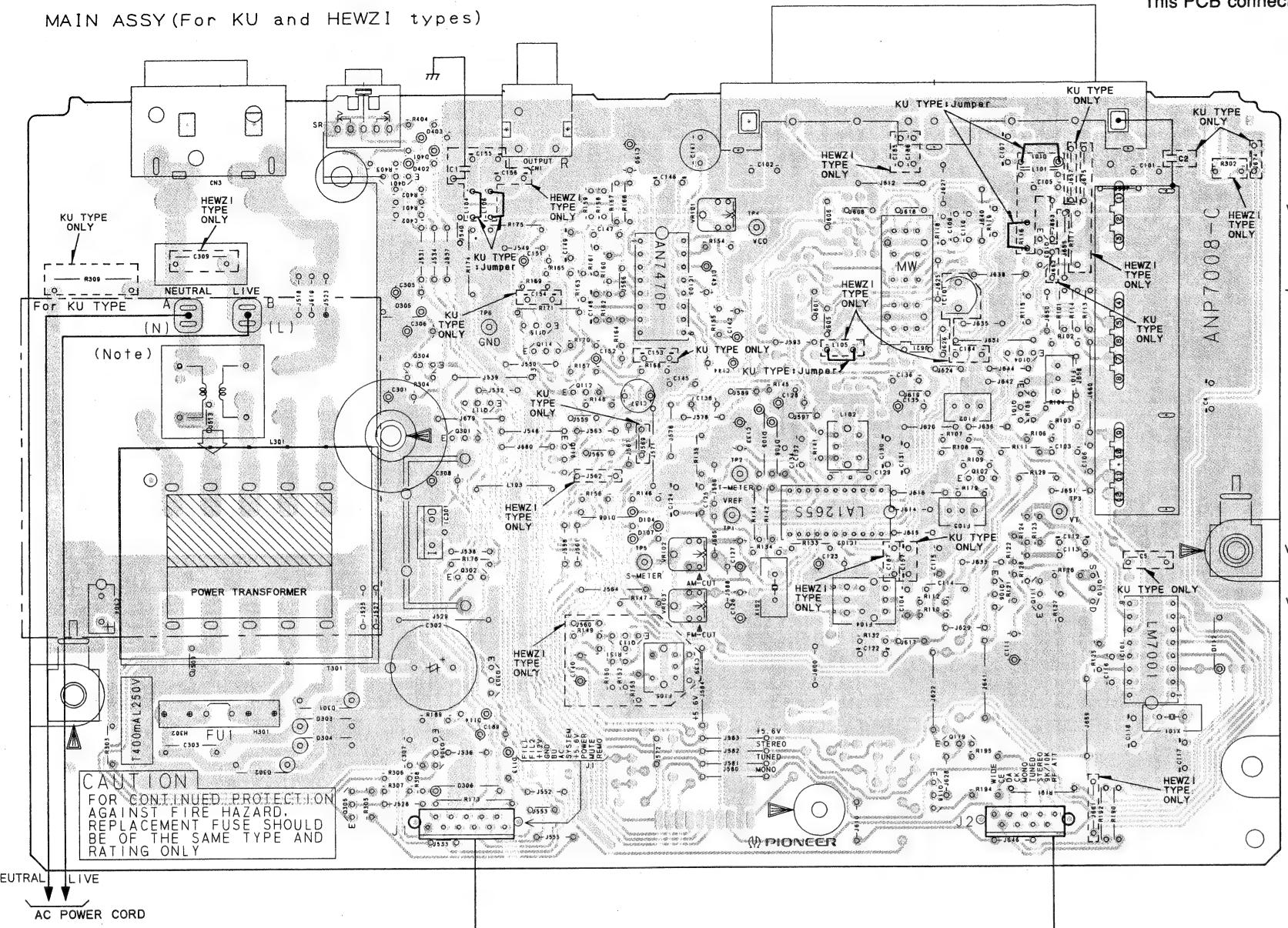
3.1 MAIN ASSY (For KU and HEWZI types)



MAIN ASSY (For KU and HEWZI types)

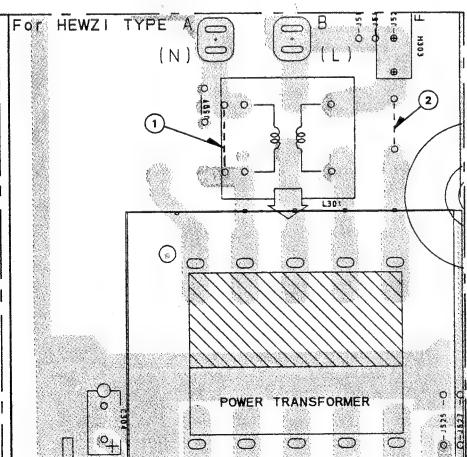
This PCB connection diagram is viewed from the parts mounted side.

A



C

Note: For HEWZI type, PCB diagram is changed into the following:



Line Voltage Selection (For HEWZI)

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the L301 with the jumper-lines ① and ② follows.

Voltage	L301 or jumper-lines
220V-230V	Change the jumper-lines ① and ② into the L301.
240V	Change the L301 into the jumper-lines ① and ②.

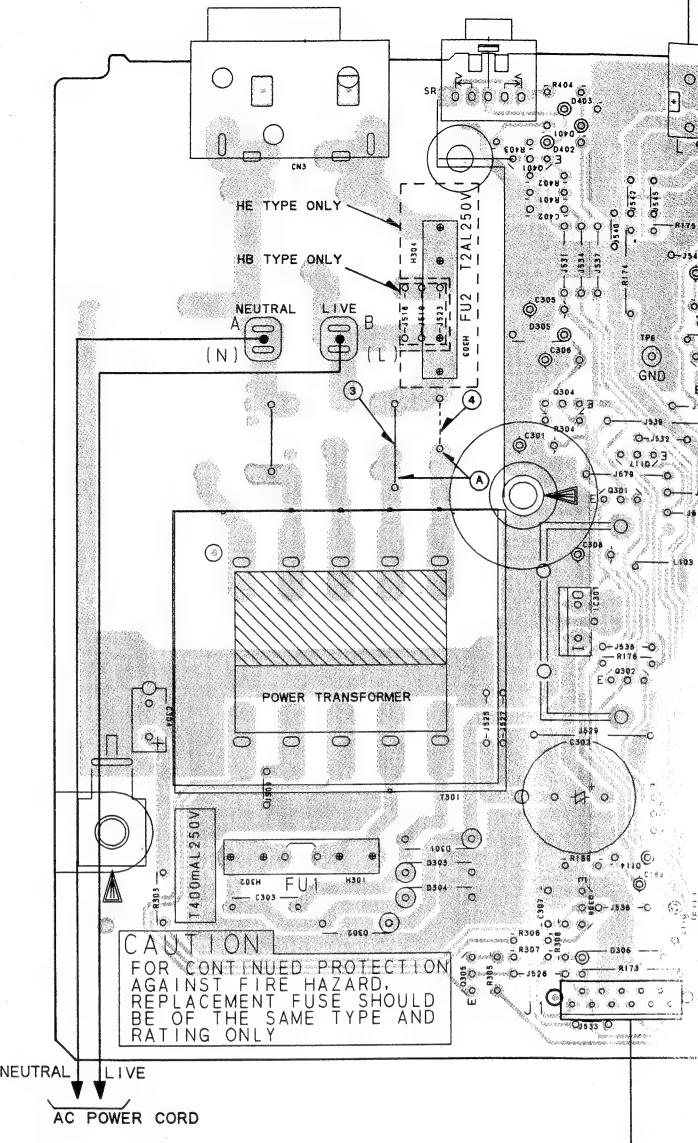
NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual. jumper-lines on the PCB may have to be removed. Forgetting this check-up will cause a serious damage.

4. Stick the line voltage label on the rear panel.

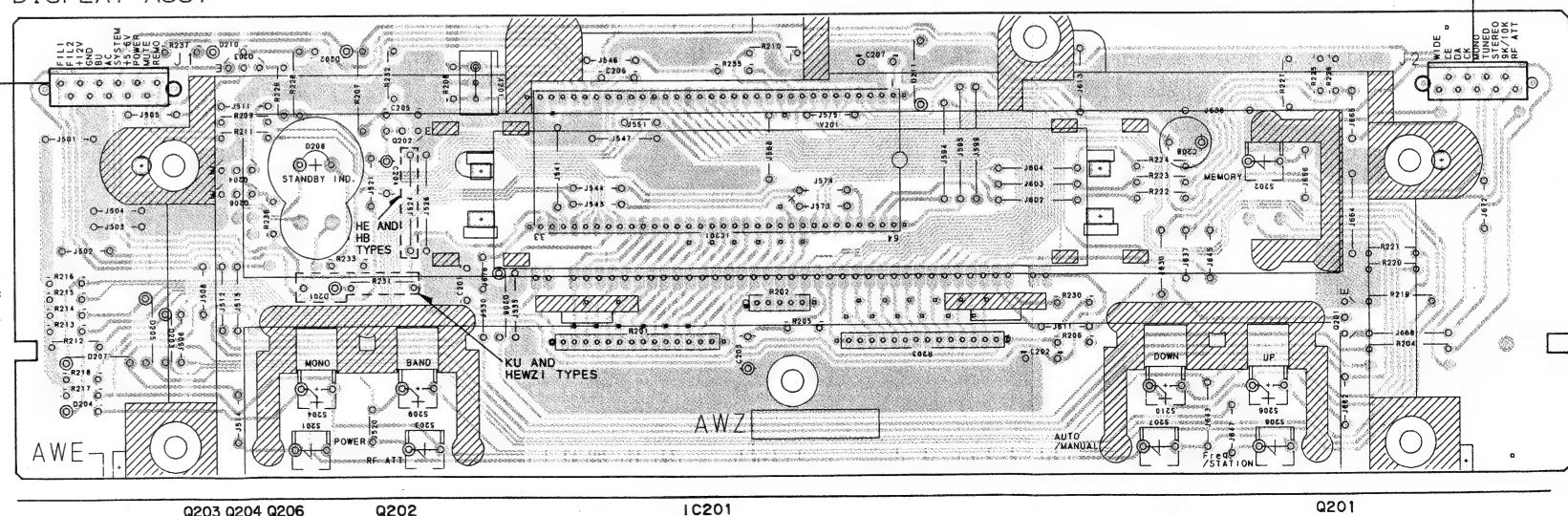
Part No.	Description
AAX-193	220V label
AAX-192	240V label

Q401
VR101
TC101
Q115
Q114
Q304 Q104
Q112
Q117 Q101
Q301
Q116
Q102
IC102
IC301
Q302
Q110
Q106 Q111
IC101
Q303
Q119
Q306
Q118
Q305

MAIN ASSY (For HE and HB types)



DISPLAY ASSY



Line Volt
Line Voltage
1. Disconnect
2. Remove it
3. Change th

Voltage
220V-230'
240V

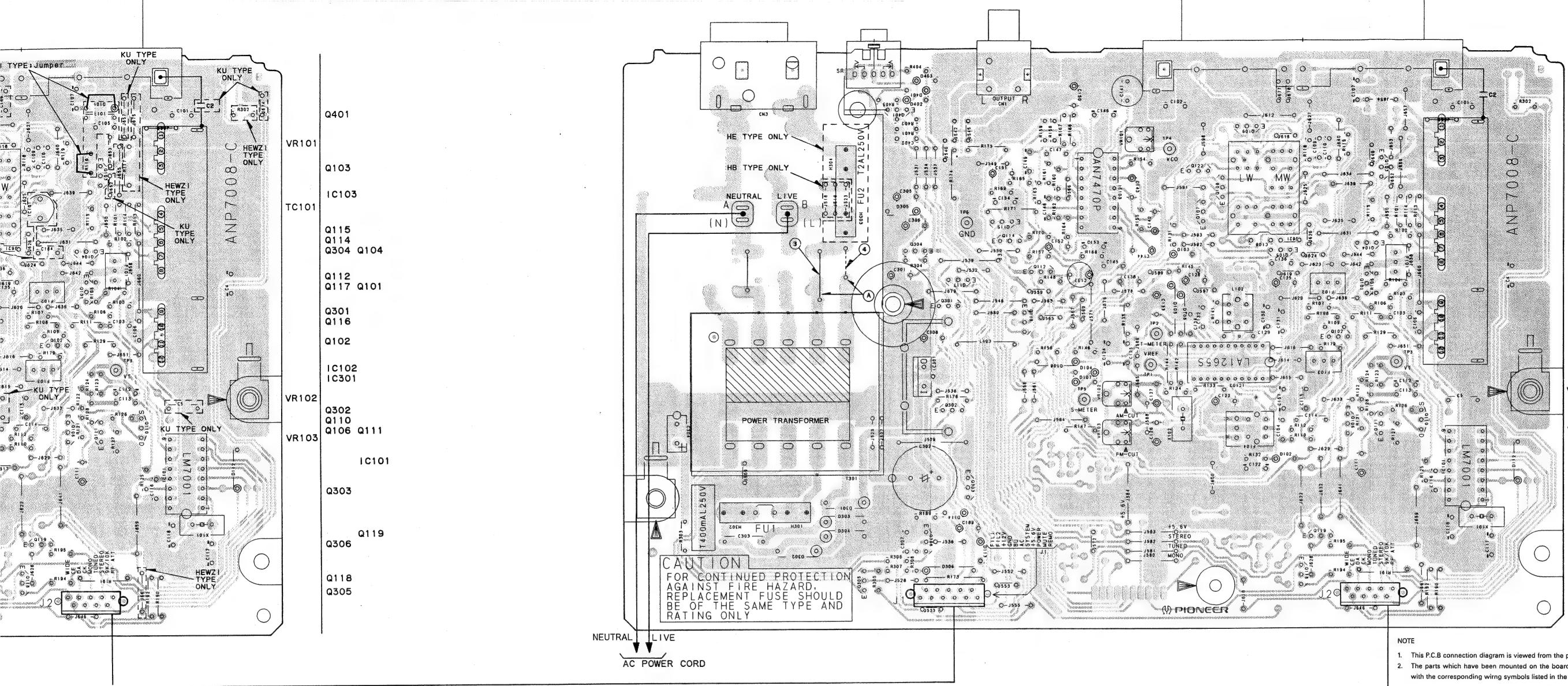
NOTE: Wher
circui
circui
jumper
Forge

4. Stick the l

Part No.
AAX-19
AAX-19

This PCB connection diagram is viewed from the parts mounted side.

MAIN ASSY (For HE and HB types)

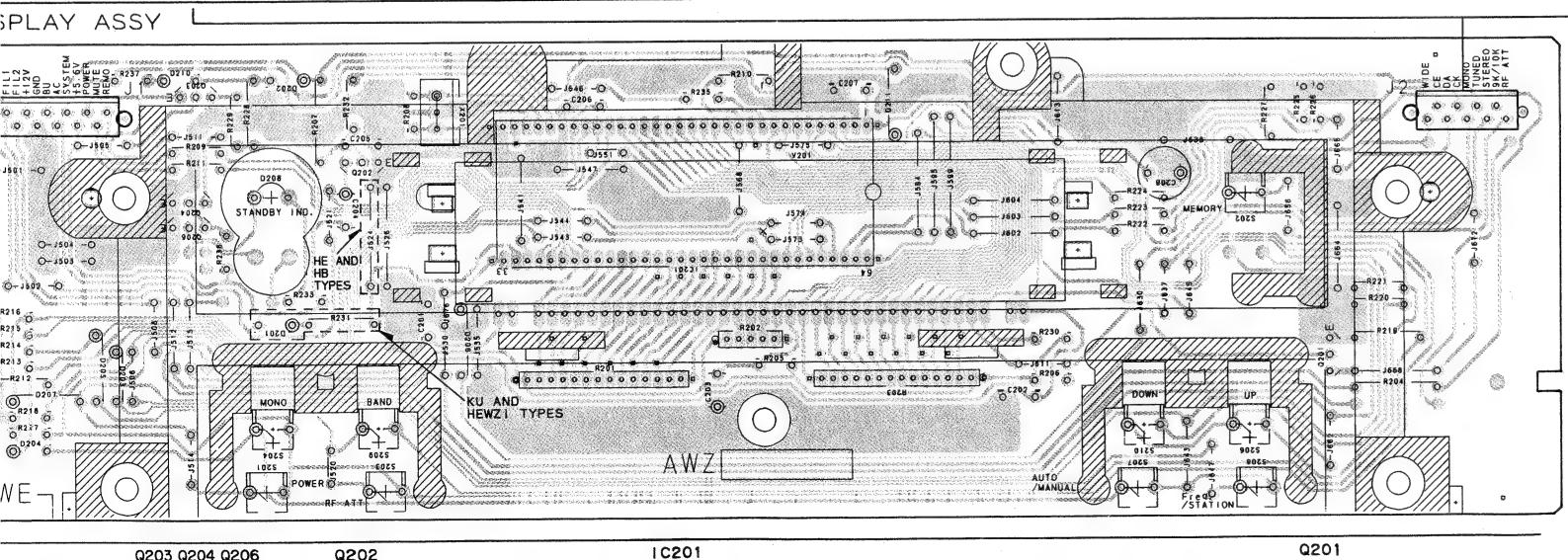


- NOTE**
1. This P.C.B connection diagram is viewed from the parts mounted side.
 2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

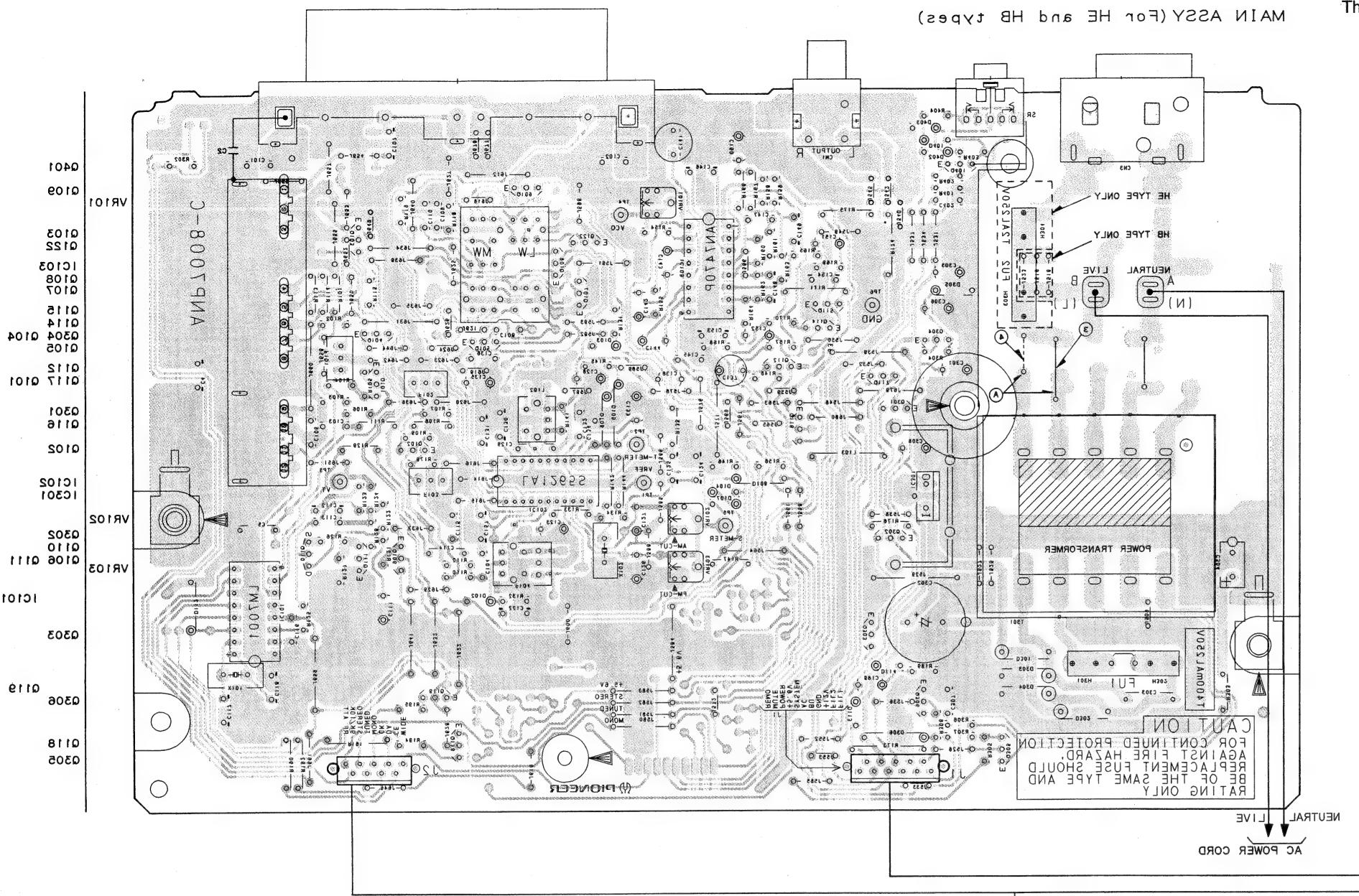
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
E O O	or	Transistor
O 215	or	Radiator type transistor
O 203	o	Diode
O R237	W	Resistor
C 513	+ -	Capacitor (Polarity)
C 518	- +	Capacitor (Non-polarity)

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

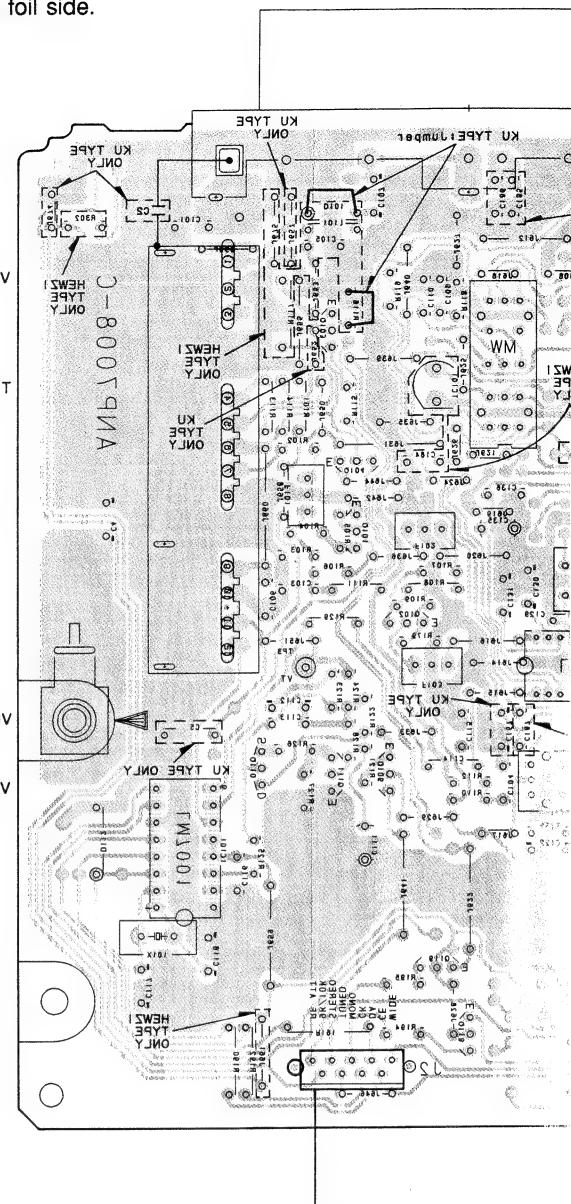
3. The capacitor terminal marked with (double circles) shows negative terminal.
4. The diode terminal marked with (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



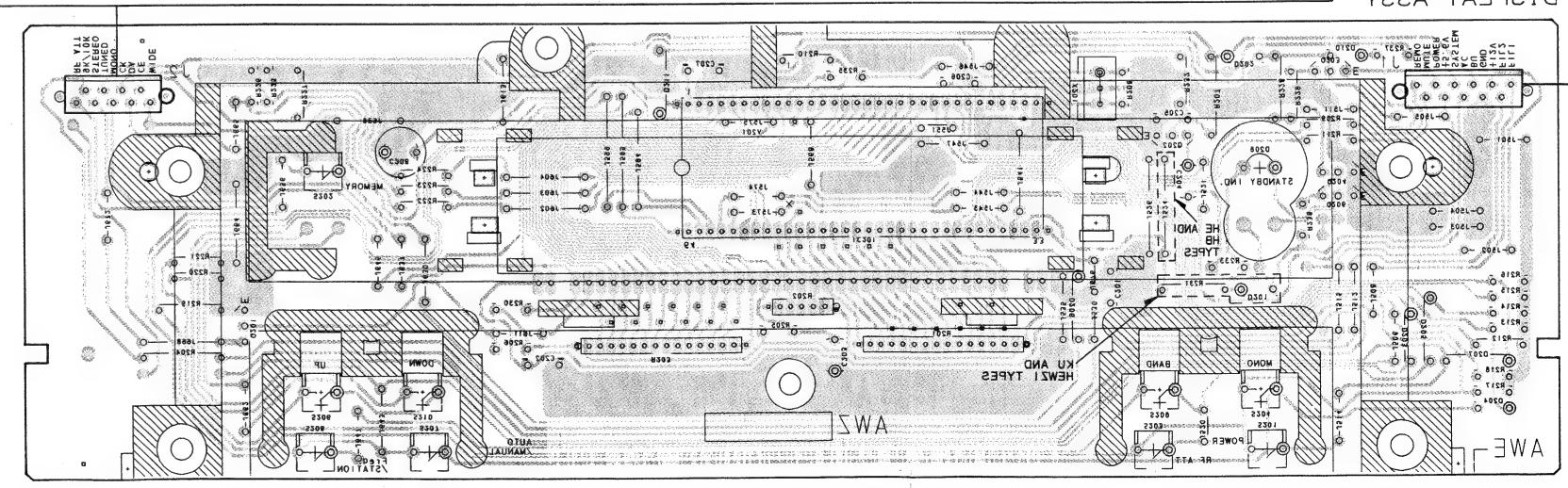
MAIN ASSY (For HE and HB types)



This PCB connection diagram is viewed from the foil side.



DISPLAY ASSY

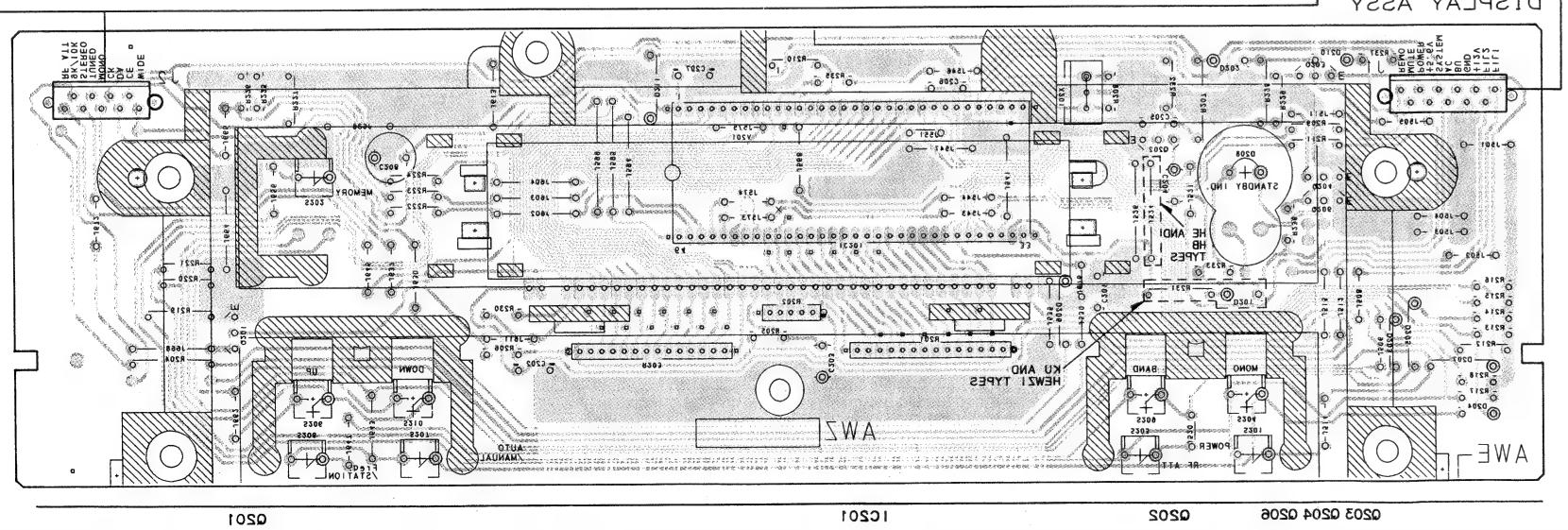
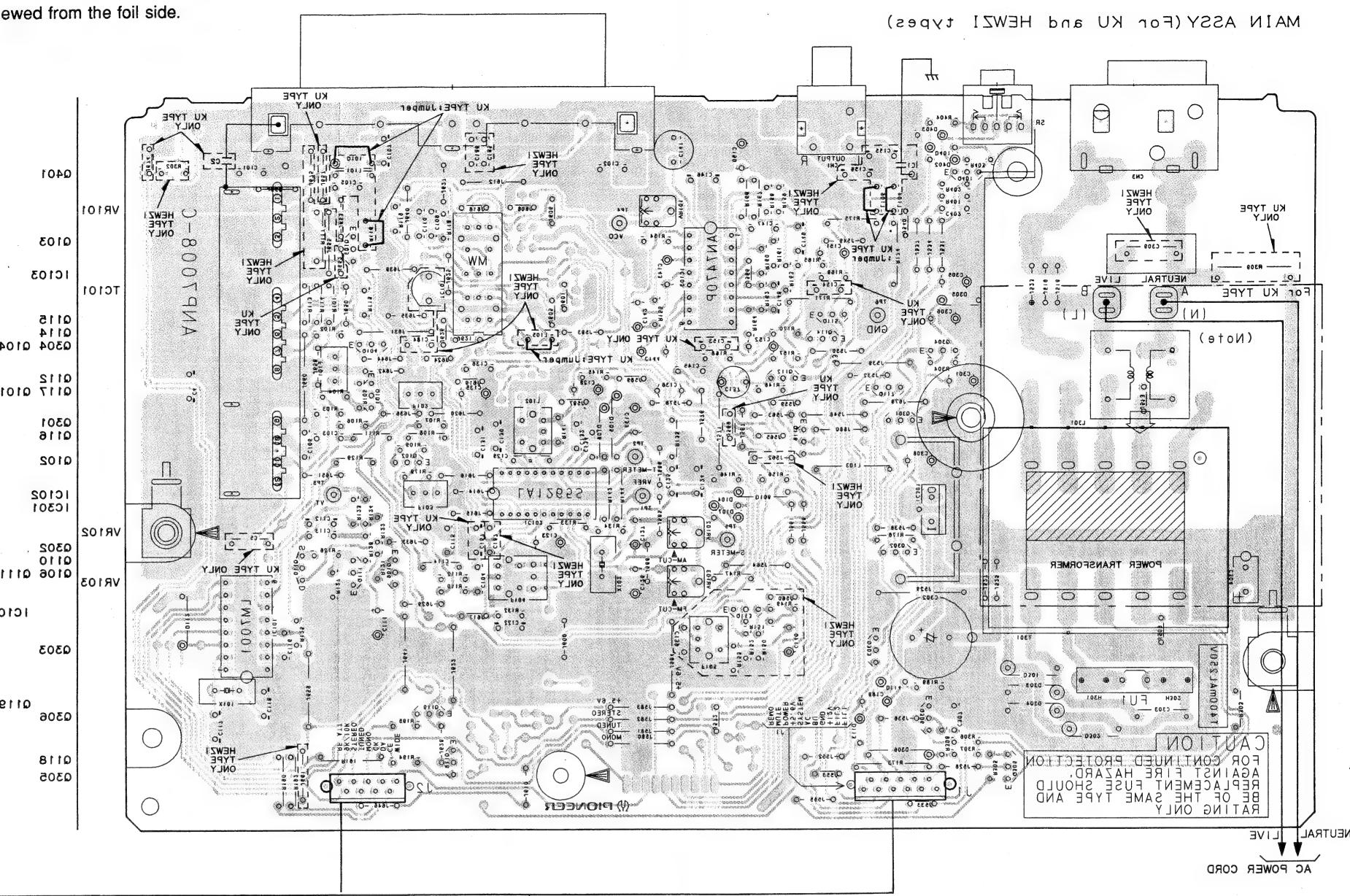
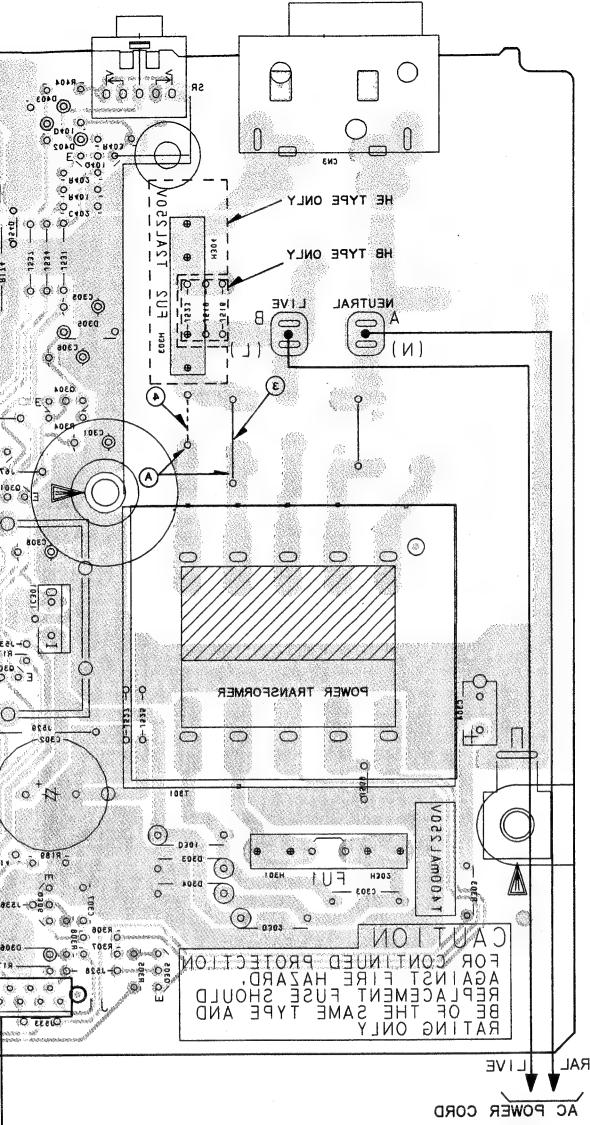


Q503 Q504 Q506

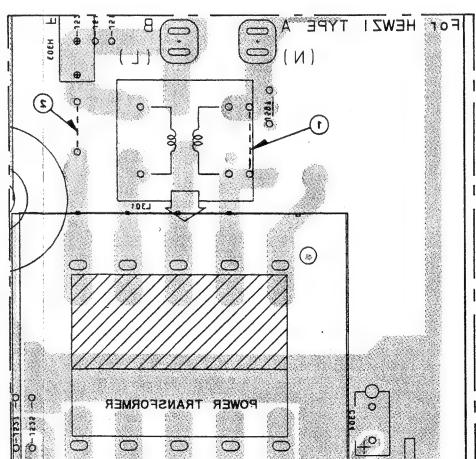
Q505 Q506

MAIN ASSY (For KU and HE and HB types)

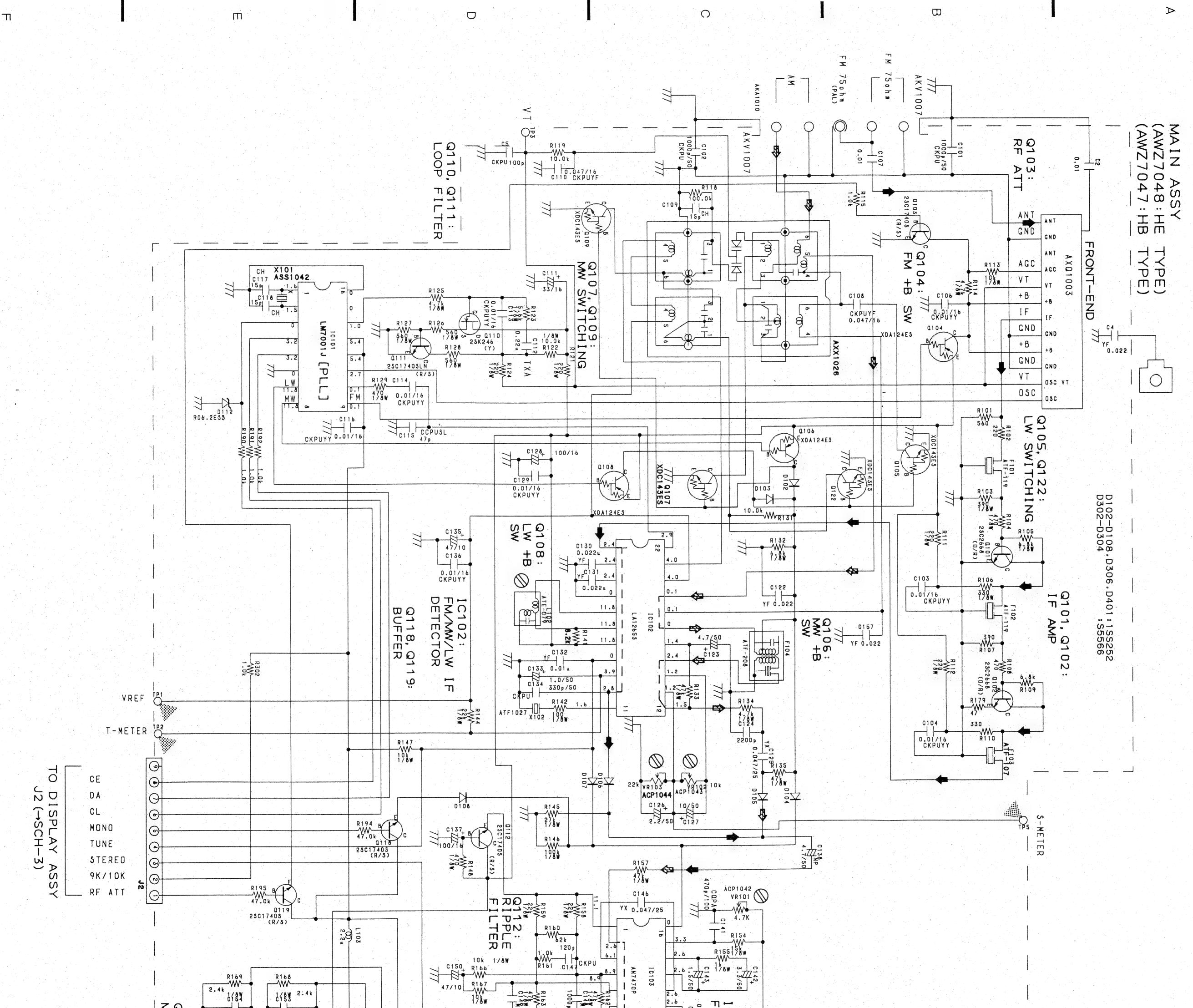
This PCB connection diagram is viewed from the foil side.



Note: For HEMZ1 type, PCB diagram is
clipped into the following modules:

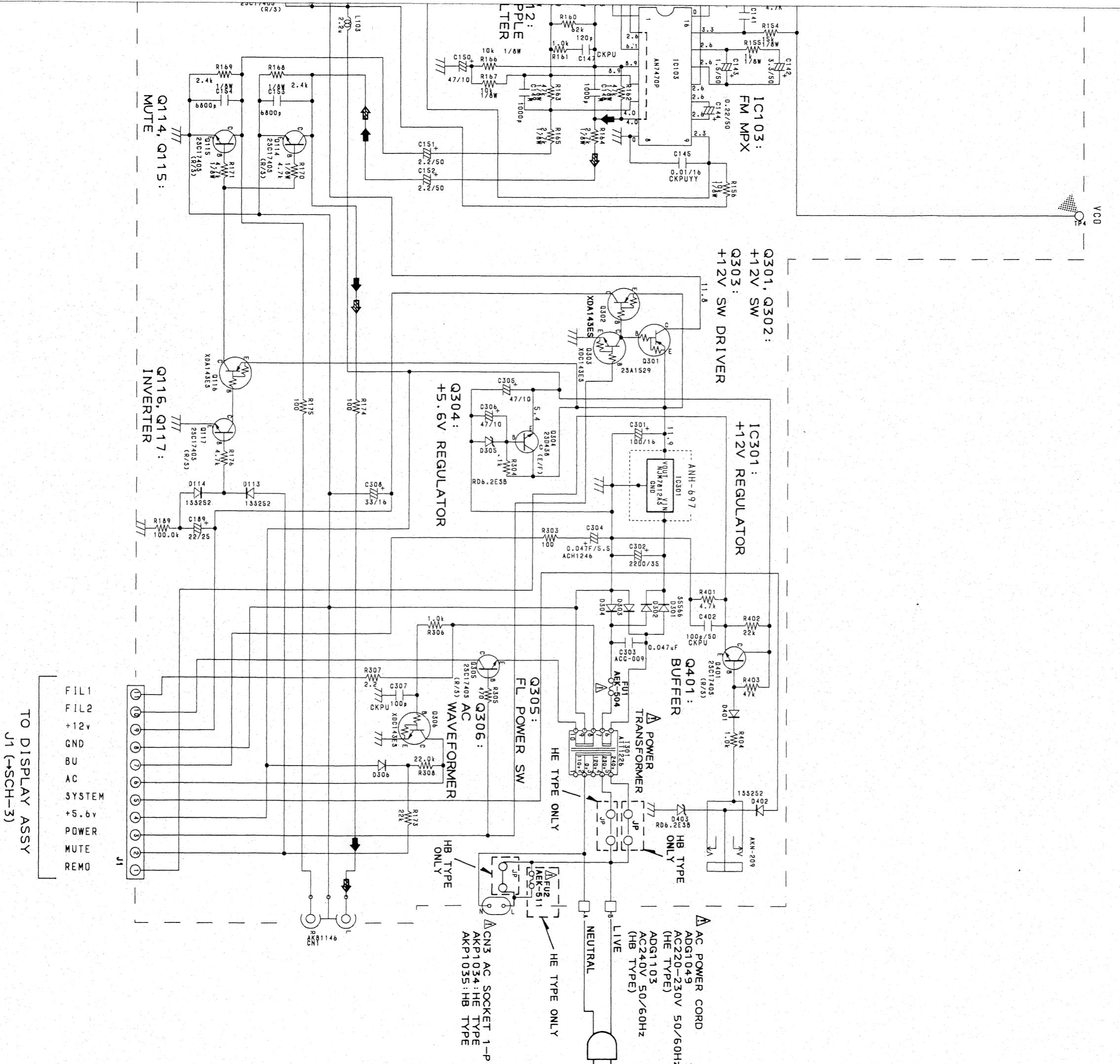


3.2 MAIN ASSY (For HE and HB types)



FM Signal route
LN/MN Signal route

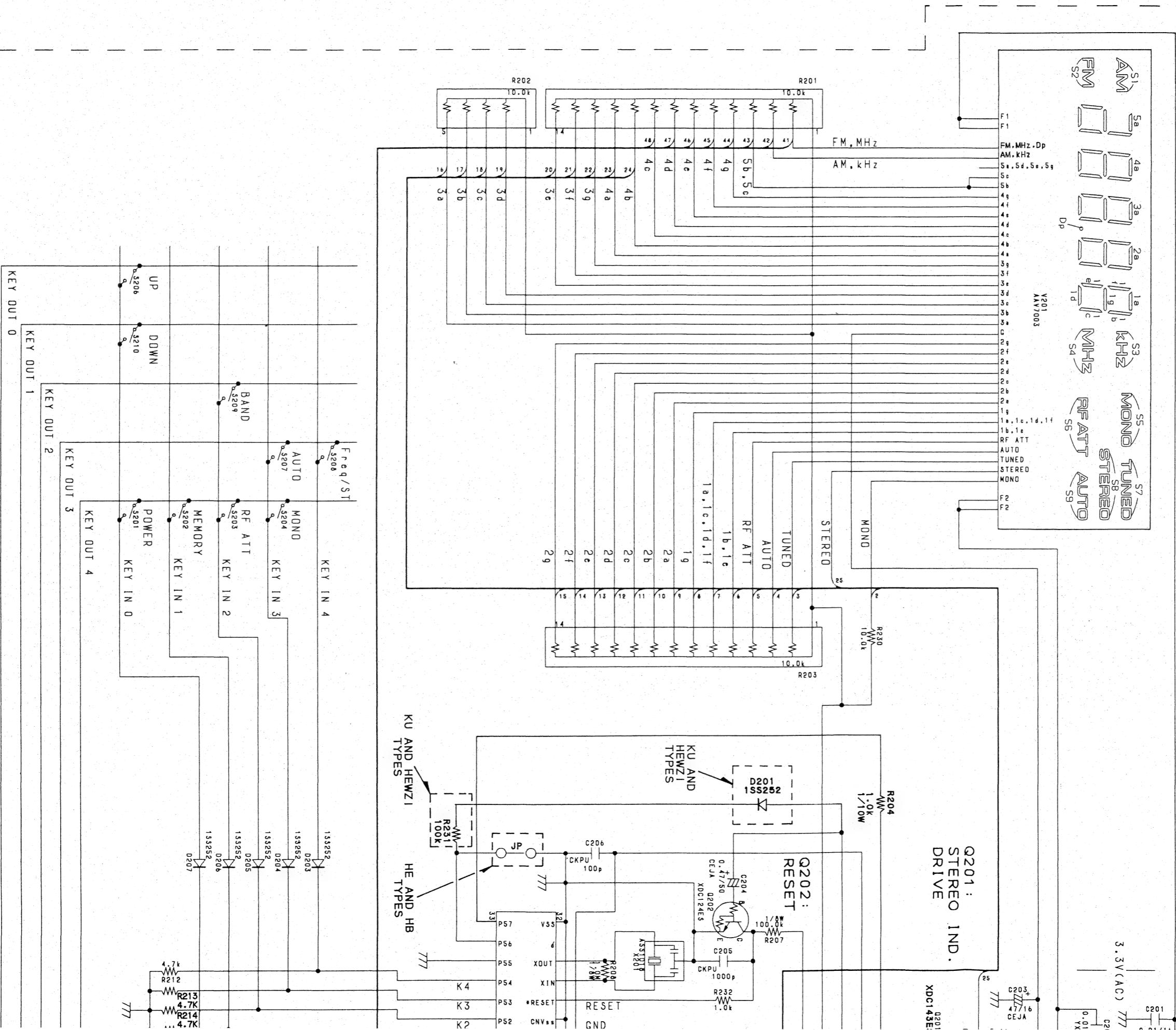
SCH-2



DISPLAY ASSY(AWZ7043:KU TYPE)
AWZ7043, KU AND MR TYPES)

(AWZ7041::HE AND HB TYPE)
(AWZ7042::HEWZ1 TYPE)

卷之三



TO MAIN ASSY J1
(→SCH-1) or (→SCH-2)

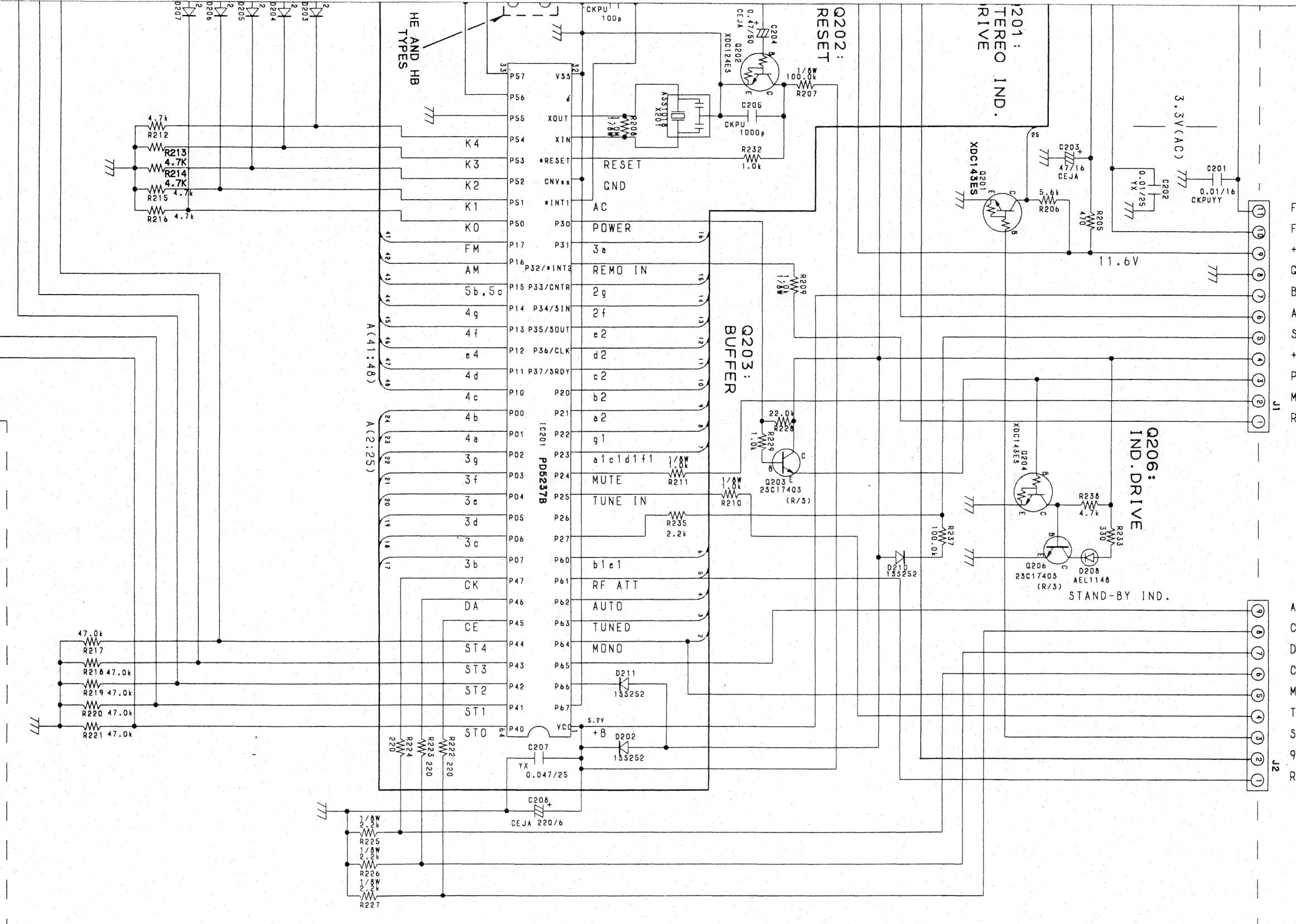
TO MAIN ASSY J2
(→SCH-1) or (→SCH-2)

SCH-3

L1
L2
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D
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STEM
.6V
WER
TE
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W/N
NO
NED
EREO
/1-OK
ATT

A



4. PCB PARTS LIST

(For F-C3/KU and HE)

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω →	56×10^1 →	561	RD1/8PM 561J
47kΩ →	47×10^3 →	473	RD1/4PS 473J
0.5Ω →	0R5		RN2H 0R5K
1Ω →	010		RS1P 010K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ →	562×10^1 →	5621	RN1/4PC 5621F
----------	---------------------	------------	---------------

Mark	No.	Description	Parts No.	Mark	Mark	No.	Description	Parts No.	Mark
LIST OF ASSEMBLIES									
MAIN ASSEMBLY (For HE type)									
TUNER ASSEMBLY (For HE type)		AWE7002					SEMICONDUCTORS		
└ DISPLAY ASSEMBLY		AWZ7041					IC103		AN7470P
└ MAIN ASSEMBLY		AWZ7048					IC102		LA1265S
TUNER ASSEMBLY (For KU type)		AWE7004					IC101		LMT001J
└ DISPLAY ASSEMBLY		AWZ7043					IC301		NJM7812AS
└ MAIN ASSEMBLY		AWZ7050					Q301		2SA1529
DISPLAY ASSEMBLY (For KU and HE types)									
SEMICONDUCTORS									
IC201		PD5237B					Q103,Q112,Q114,Q115		2SC1740S
Q203,Q206		2SC1740S					Q117—Q119,Q305,Q401		2SC1740S
Q202		XDC124ES					Q111		2SC1740SLN
Q201,Q204		XDC143ES					Q101,Q102		2SC2668
D201—D207,D210,D211		1SS252					Q304		2SD438
D208		AEL1148							
SWITCHES AND RELAYS									
S201—S204,S206—S210		ASG1034					Q110		2SK246
CAPACITORS							Q104,Q106,Q108		XDA124ES
C208		CEJA221M6					Q116,Q302		XDA143ES
C203		CEJA470M16					Q105,Q107,Q109,Q122,Q303		XDC143ES
C204		CEJAR47M50					Q306		XDC143ES
C202		CKDYX103M25							
C207		CKDYX473M25					D102—D108,D113,D114,D306		1SS252
C206		CKPUYB101K50					D401,D402		1SS252
C205		CKPUYB102K50					D112,D305,D403		RD6.2ESB
C201		CKPUYY103M16					D301—D304		S5566
RESISTORS									
R201,R203		RA13T103J					COILS AND FILTERS		
R202		RA4T103J					L102		ATE—079
Other Resistors		RD1/8PM□□□J					F101,F102		ATF—119
OTHERS							F103		ATF—107
X201	(4.19MHz)	ASS1018					F104		ATF—208
V201	FL TUBE	AAV7003					L103		LAU2R2K
CAPACITORS									
C303			(0.047/AC25V)						ACG—009
C304			(47000/5.5)						ACH1246
C109,C117,C118									CCDCH150J50
C115									CCPUSL470J50
C138									CEANP4R7M50
C133									CEAS010M50
C127									CEAS100M50
C128,C137,C301									CEAS101M16
C143									CEAS1R5M50
C189									CEAS220M25
C302									CEAS222M35

5. ADJUSTMENTS

ADJUSTMENT OF THE FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in the Fig. 1.

Step No.	Adjustment Title	FM SG(1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment	
		Frequency(MHz)	Level(dBμV)		Adjustment Location	Specifications
1	Center adjustment	98	60	98.0MHz	L102	Adjust so that the DC voltage between the TP1(VREF) and TP2(T-METER) becomes 0V±50mV.
2	VCO adjustment	Non modulation	60	98.0MHz	VR101	Adjust so that the output of the TP4 (VCO) becomes 76kHz ±0.5kHz.
3	TUNED IND. Lighting level	98	24 (±3dB)	98.0MHz	VR103	Adjust so that the indicators of TUND IND. start to light up.

ADJUSTMENT OF MW TUNER SECTION

- Set the mode selector to AM(MW) BAND.
- Connect the wiring as shown in the Fig. 1.

Step No.	Adjustment Title	AM SG(400Hz, 30% Mod.)		Reception Frequency Display	Adjustment	
		Frequency(kHz)	Level(dBμV/m)		Adjustment Location	Specifications
1	Tracking adjustment *2	603	Low input	603kHz	AM RF Tuning block antenna coil	Adjust so that the DC voltage between the TP5(S-METER) and GND becomes at maximum level.
		1395		1395kHz	TC101	
3	IFT adjustment *2	603		603kHz	F104	
4	TUNED IND. Lighting level	999 *1	55 (±5dB)	999kHz *1	VR102	Adjust so that the indicator of TUNED IND. start to lights up.

Note1:

For the area using 10kHz step (KU type : 10kHz), frequencies should be as follows:

*1 : 1000kHz

Note2:

Adjustment marked with “*2” is only for HEWZI type.

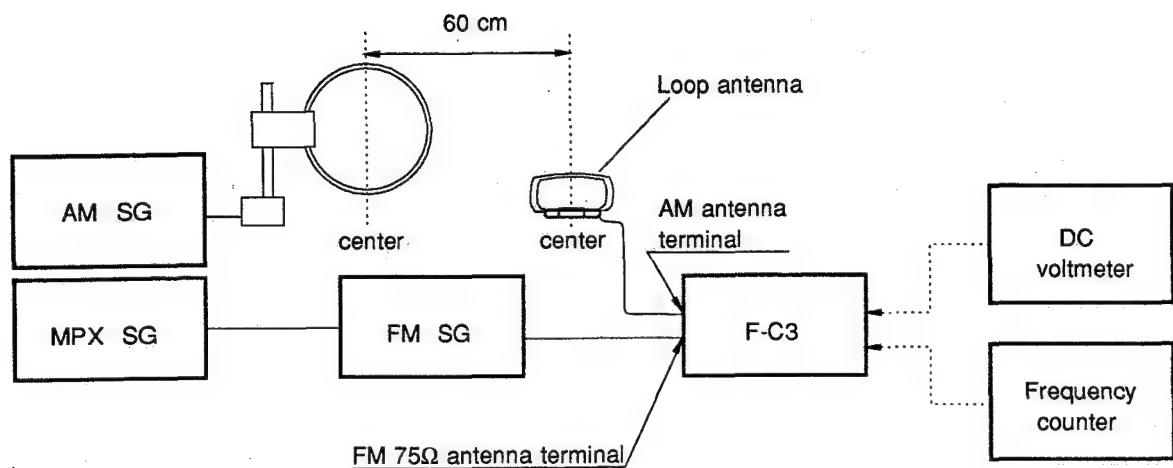
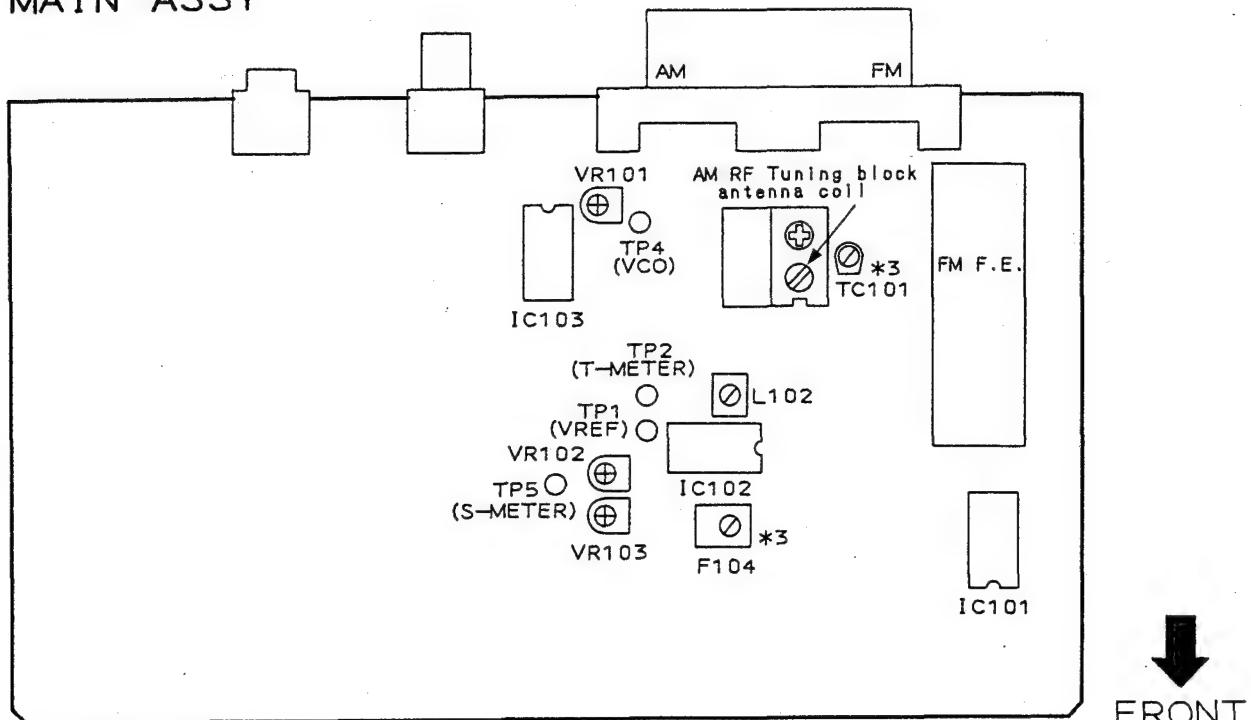


Fig. 1 AM and FM adjustment wiring diagram

MAIN ASSY



*3 : HEWZI type only

Fig. 2 Adjustment points

6. FOR HEWZI AND HB TYPES

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

6.1 CONTRAST OF MISCELLANEOUS PARTS FOR HEWZI TYPE

F-C3/HEWZI and F-C3/KU have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/KU	F-C3/HEWZI	
Δ	TUNER assembly	AWE7004	AWE7003	Refer to P.5
	DISPLAY assembly	AWZ7043	AWZ7042	
	MAIN assembly	AWZ7050	AWZ7049	
	Screw (STEEL)	.....	ABA1047
	AC power cord	ADG1058	ADG1049	
	FM antenna	ADH1005	ADH1002	
	FU1 Fuse (500mA/125V)	AEK-136	.....
	FU1 Fuse (T400mA/250V)	.....	AEK-504
	Cord stopper	AEP-113	AEC-882	
	Packing case	AHD7015	AHD7014	
	Sub panel	AMB7073	AMB7029	
	Front panel	AMB7079	AMB7027	
	Rear panel	ANC7060	ANC7057	
NSP	Operating instructions (English)	ARB7005	
	Operating instructions (German/Italian)	.....	ARC7005
NSP	PCB post	DEC1390	
	65 label	ORW1069	.....

MAIN ASSEMBLY

AWZ7049 and AWZ7050 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7050	AWZ7049	
Δ	FE module assembly (3L)	AXQ1003	
	FE module assembly (4L)	.....	AXQ1004
	AM RF tuning block (MW)	AXX1025	AXX1027	
	D101	.....	1SV156
	Q113	.....	2SC1740S
	R116	.....	RD1/8PM270J
	R117	.....	RD1/2PM681J
	R149	.....	RD1/8PM224J
	R150	.....	RD1/8PM473J
	R151	.....	RD1/8PM222J
	R152	.....	RD1/8PM152J

Mark	Symbol & Description	Part No.		Remarks
		AWZ7050	AWZ7049	
△	R153	.....	RD1/8PM392J	
	R160	RD1/8PM623J	RD1/8PM473J	
	R168,R169	RD1/8PM242J	RD1/8PM912J	
	R302	.....	RD1/8PM102J	
	R309	ACN-208	.....
	C1	.....	CKDYX103M25	
	C2	CKDYB103K50	.....
	C5	CKPUYB101K50	.....
	C105	.....	CKDYB103K50	
	C110	CKPUYF473Z16	CKDYX473M25	
	C139	.....	CKDYB122K50	
	C140	.....	CEAS4R7M50	
	C153,C154	CKDYX103M25	.....
	C155,C156	.....	CKDYB332K50	
	C157	CKDYF223Z50	.....
△	C184	.....	CKPUYF223Z25	
	C185	.....	CKPUYB101K50	
	C186	.....	CKPUYB102K50	
	C187	.....	CCPUSL270J50	
	C309	.....	ACG1002	
	TC101	.....	ACM-018	
	F105	.....	ATF1088	
	L101	.....	LAU2R2J	
	L104,L106	.....	LAU2R2K	
	L105	.....	LAU330J	
△	L301	ATF-163	ATF1135	
	Antenna terminal 4-P	AKA1009	.....
	Antenna terminal PAL 2-P	.....	AKA1012	
	CN3 AC socket 1-P	AKP1078	AKP1034	

DISPLAY ASSEMBLY

Although AWZ7042 and AWZ7043 are different in part number, they consist of the same components.

6.2 CONTRAST OF MISCELLANEOUS PARTS FOR HB TYPE

F-C3/HB and F-C3/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HB	
	TUNER assembly MAIN assembly	AWE7002 AWZ7048	AWE7001 AWZ7047	

Mark	Symbol & Description	Part No.		Remarks
		F-C3/HE	F-C3/HB	
△	AC power cord	ADG1049	ADG1103	
	Binder	.....	AEC-093	
△	FU2 Fuse (T2A/250V)	AEK-511	.....
	Rear panel	ANC7058	ANC7059	
	Operating instructions (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARE7010	.....
	Operating instructions (English)	.....	ARB7005	
	Sub operating instructions (English/German/French/Italian/ Swedish/Spanish/Dutch/Portuguese)	ARH7003	.....

MAIN ASSEMBLY

AWZ7047 and AWZ7048 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7048	AWZ7047	
△	CN3 AC socket 1-P	AKP1034	AKP1035	

7. SPECIFICATIONS

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity (IHF)	12.7 dBf (1.2 μ V/75 Ω)
50 dB Quieting Sensitivity	Mono; 18 dBf (2.2 μ V/75 Ω) Stereo; 38.3 dBf (22.6 μ V/75 Ω)
Sensitivity (DIN)	Mono; 1.0 μ V/75 Ω Stereo; 35 μ V/75 Ω
Signal-to-Noise Ratio	Mono; 78 dB (at 85 dBf) Stereo; 74 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN)	Mono; 62 dB Stereo; 60 dB
Distortion	0.3 % (1 kHz)
Alternate Channel Selectivity	60 dB (300 kHz)
Stereo Separation	40 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz \pm 1 dB
Image Response Ratio	50 dB
IF Response Ratio	90 dB
Antenna Input	75 Ω unbalanced
Output	650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range	
U.S. model	530 kHz to 1,700 kHz (Step 10 kHz)
U.K. model	531 kHz to 1,602 kHz (Step 9 kHz)
Sensitivity (IHF, Loop antenna)	350 μ V/m
Selectivity	20 dB
Signal-to Noise Ratio	50 dB
Antenna	Loop Antenna
Output	150 mV (30 % MOD.)

LW Tuner Section (U.K. model only)

Frequency range	153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna)	1,500 μ V/m
Selectivity	20 dB
Signal-to-Noise Ratio	50 dB
Antenna	Loop Antenna
Output	158 mV (30 % MOD.)

Miscellaneous

Power Requirements	
U.S. model	AC 120 V, 60 Hz
U.K. model	AC 240 Volts ~, 50/60 Hz
Power Consumption	10 W
Dimensions	260 (W) x 95.5 (H) x 336 (D) mm
Weight (without package)	10-1/4 (W) x 3-3/4 (H) x 13-3/16 (D) in
	2.3 kg (5 lb 1 oz)

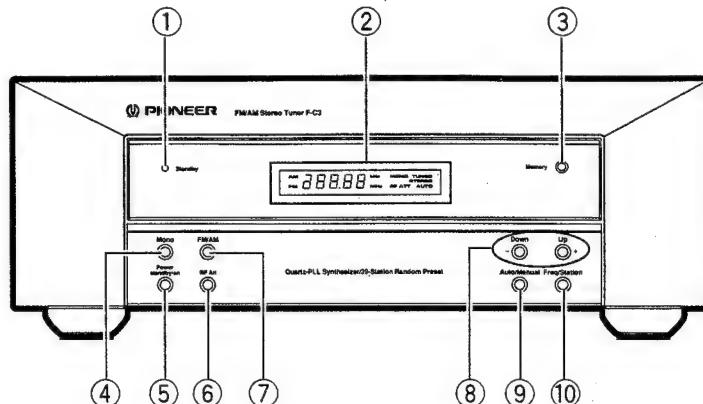
Furnished Parts

FM T-type Antenna	1
AM Loop Antenna	1
Connecting Cord with Pin Plugs	1
Operating Instructions	1
Control cable	1

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.

8. PANEL FACILITIES



① Standby indicator

Goes out when power is turned on; lights when power is set to standby.

② Display section

③ Memory button

④ Mono button

⑤ Power standby/on switch

This is the switch for electric power.

On: When set to the on position, power is supplied and the unit becomes operational.

Standby: When set to the standby position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

When the Standby indicator lights, the unit is in STANDBY.

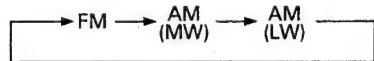
⑥ RF Att button

Press this RF attenuator button if the excessive strength of FM signals results in distortion. The RF ATT indicator will light in the display section.

- This function does not operate during AM broadcasts.

⑦ FM/AM button

Each time you press the button, the changes as follows.

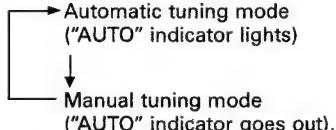


⑧ Tuning Up+Down- button

Use to tune broadcast stations.

⑨ Auto/Manual button

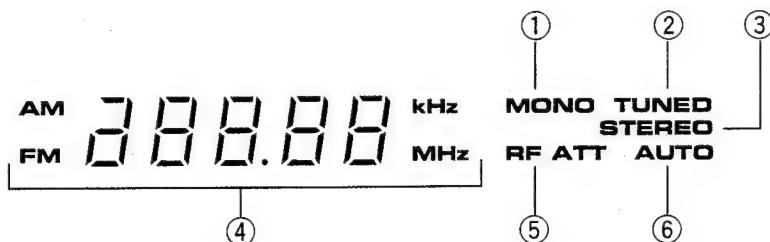
When this button is pressed, the tuning function changes alternately as follows:



- Auto tuning is not possible on the LW band.

⑩ Frequency/Station button

Display Section



- ① Lights when the Mono button is set to ON.

- ② Lights when broadcast is received.

- ③ Lights during reception of stereo broadcast.

- ④ Displays the frequency or station.

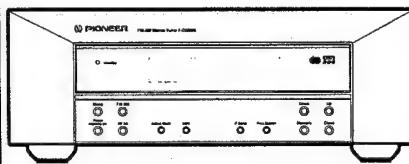
- ⑤ Lights when RF attenuator function is on.

- ⑥ Lights during auto tuning mode.

PIONEER
The Art of Entertainment

4209

Service Manual



ORDER NO.
RRV1108

FM/AM DIGITAL SYNTHESIZER TUNER

F-C5RDS

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	F-C5RDS		
HE	○	AC220-230V	AC240V, *
HB	○	AC240V	AC220-230V, *
HEWZI	○	AC220-230V	AC240V, *

* : Alter the wiring of the Power-supply block at the primary winding of Power-transformer referring to the "Line Voltage Selection" described in Service Manual.

- For HB and HEWZI types, refer to page 30.

CONTENTS

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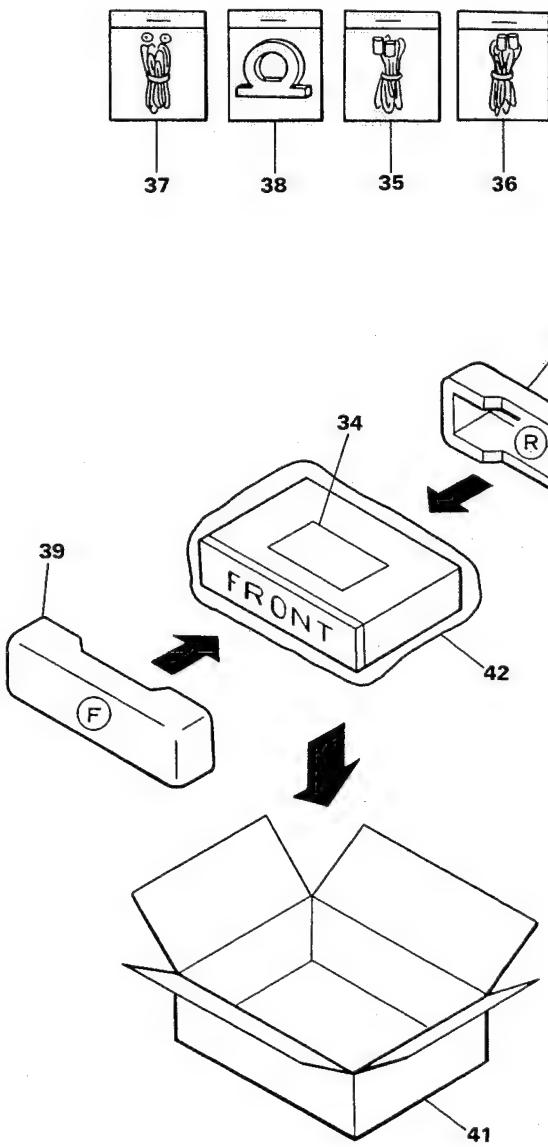
4209

1. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Mark No.	Description	Parts No.
1	SUB PANEL	AMB7029
2	FRONT PANEL	AMB7080
3	FRONT PANEL	ANB7005
Δ 4	FU1 FUSE (2.5A,250V)	AEK-512
Δ 5	AC POWER CORD	ADG1049
NSP 6	CHASSIS	ANA7006
7	REAR PANEL	ANC7095
8	INSULATOR	PNW2363
9	WASHER	ABE7001
10	CUSHION GUM	AEB7004
11	NYLON BINDER	AEC-093
12	BINDER	AEC-826
Δ 13	STRAIN RELIEF	AEC-882
14	PCB SPACER(3X12)	AEC1372
15	SPACER (PVC)	AEC7007
NSP 16	PCB MOULD	AMR1525
17	SCREW (STEEL)	ABA1006
18	SCREW	ABA1018
19	SCREW (STEEL)	ABA1048
20	SCREW	BBZ26P100FMC
21	SCREW	BBZ30P080FZK
22	SCREW	BBZ30P100FZK
23	DISPLAY PANEL	AAK7071
24	LED LENS	PNW2019
25	NAME PLATE (AL)	RAN1013
26	BUTTON	AAD7052
27	BUTTON	RAC1859
28	BONNET	ANE7010
29	TUNER ASSEMBLY	AWZ7272
30	POWER ASSEMBLY	AWZ7275
31	OUTLET ASSEMBLY	AWZ7279
32	DISPLAY ASSEMBLY	AWP7001
33	4 SERIAL F.E. MODULE ASSY	AXQ1004
34	OPE. INSTRUCTIONS (English/French/German/Italian/ Swedish/Dutch/Spanish/ Portuguese)	ARE7015
35	PLUG CORD	ADE-052
36	CORD WITH PLUG	ADE-085
37	FM ANTENNA	ADH1005
38	LOOP ANTENNA	ATB1011
39	F.PAD	AHA7010
40	R.PAD(PS)	AHA7011
41	PACKING CASE	AHD7055
42	PACKING SHEET	AHG1093
43	FLEXIBLE CABLE	ADD1114



1

2

3

4

5

6

F-C5RDS

A

A

B

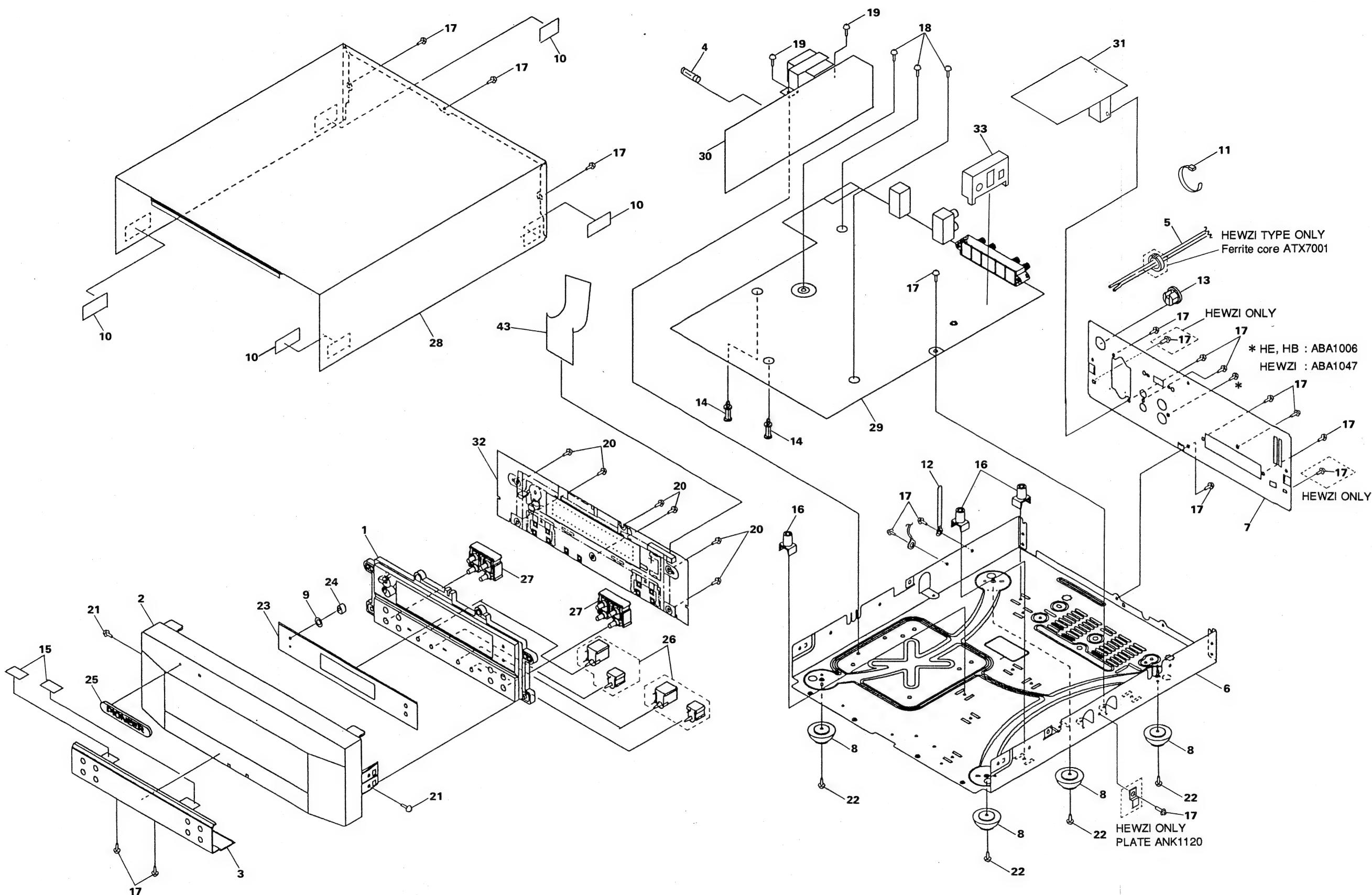
B

C

C

D

D



NOTE: Screws adjacent to ▼ mark on product are used for disassembly.

1

2

3

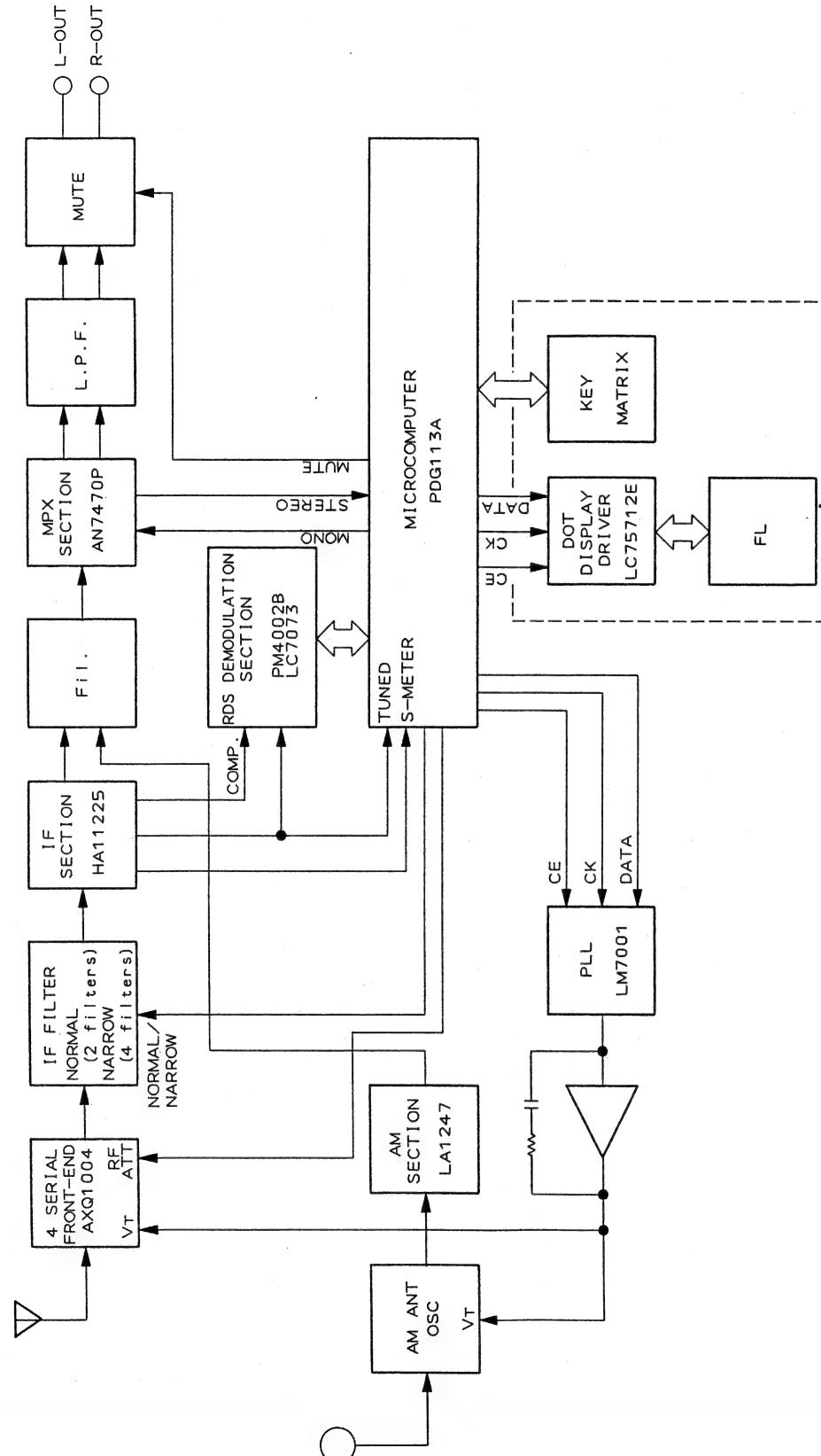
4

5

6

4

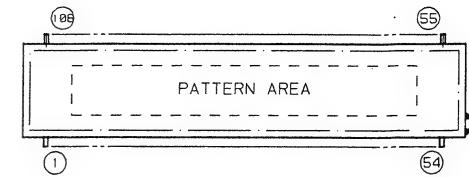
2. BLOCK DIAGRAM



3. FL INFORMATION

■ AAV7008 (V901)

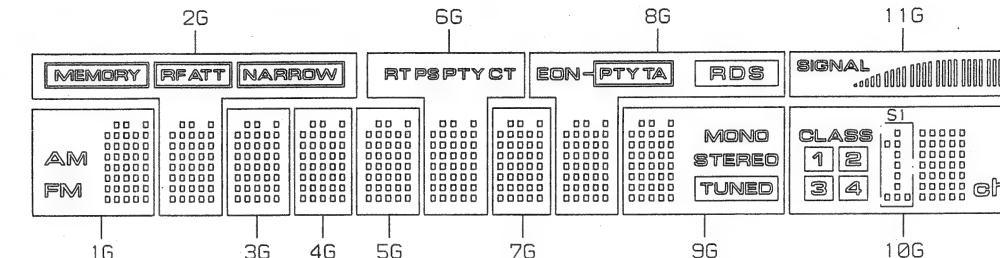
PIN LOCATION



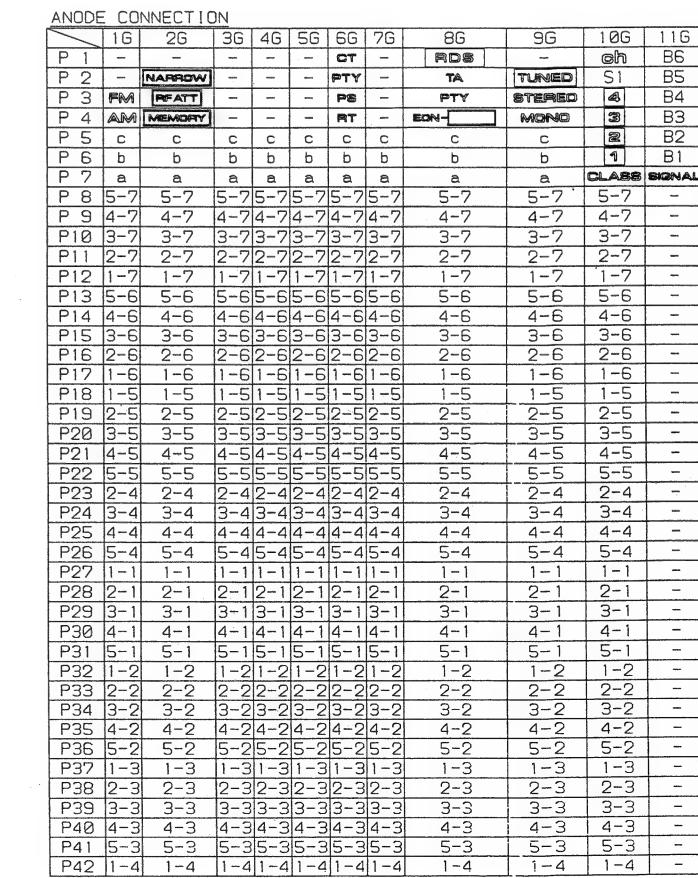
PIN CONNECTION

NOTE 1) F1,F2 --- Filament
 2) NP ----- No pin
 3) NX ----- No extend pin
 4) DL ----- Datum Line 5) NC ----- No connection
 6) 1G~11G --- Grid
 7) IC ----- Internal connection
 8) Pin50 and pin73 are connected inside.

GRID ASSIGNMENT



a	b	c
1-1	2-1	3-1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-2	2-2	3-2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-3	2-3	3-3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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1-5	2-5	3-5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-6	2-6	3-6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-7	2-7	3-7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS (Type 3A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:

Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. CAPACITORS:

Unit: p:pF or μF unless otherwise noted.
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.

5. COILS:

Unit: m:mH or μH unless otherwise noted.

6. VOLTAGE AND CURRENT:

: Signal voltage at FM 1kHz, 100% MOD.
 or : DC voltage (V) at no input signal unless otherwise noted.
Value in () is DC voltage at rated power.
⎓ mA or mA : DC current at no input signal unless otherwise noted.

7. OTHERS:

- or : Adjusting point.
- : Measurement point.
- The mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. SCH—□ ON THE SCHEMATIC DIAGRAM:

- SCH—□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. SWITCHES (Underline indicates switch position):

- S901: POWER (STANDBY/ON)
- S902: RF Att
- S905: Class
- S906: FM/AM
- S911: Memory
- S916: Active mode
- S917: IF Band
- S921: EON
- S922: Mono
- S924: Freq/Station
- S925: Up
- S926: Down

NOTE FOR PCB DIAGRAMS:

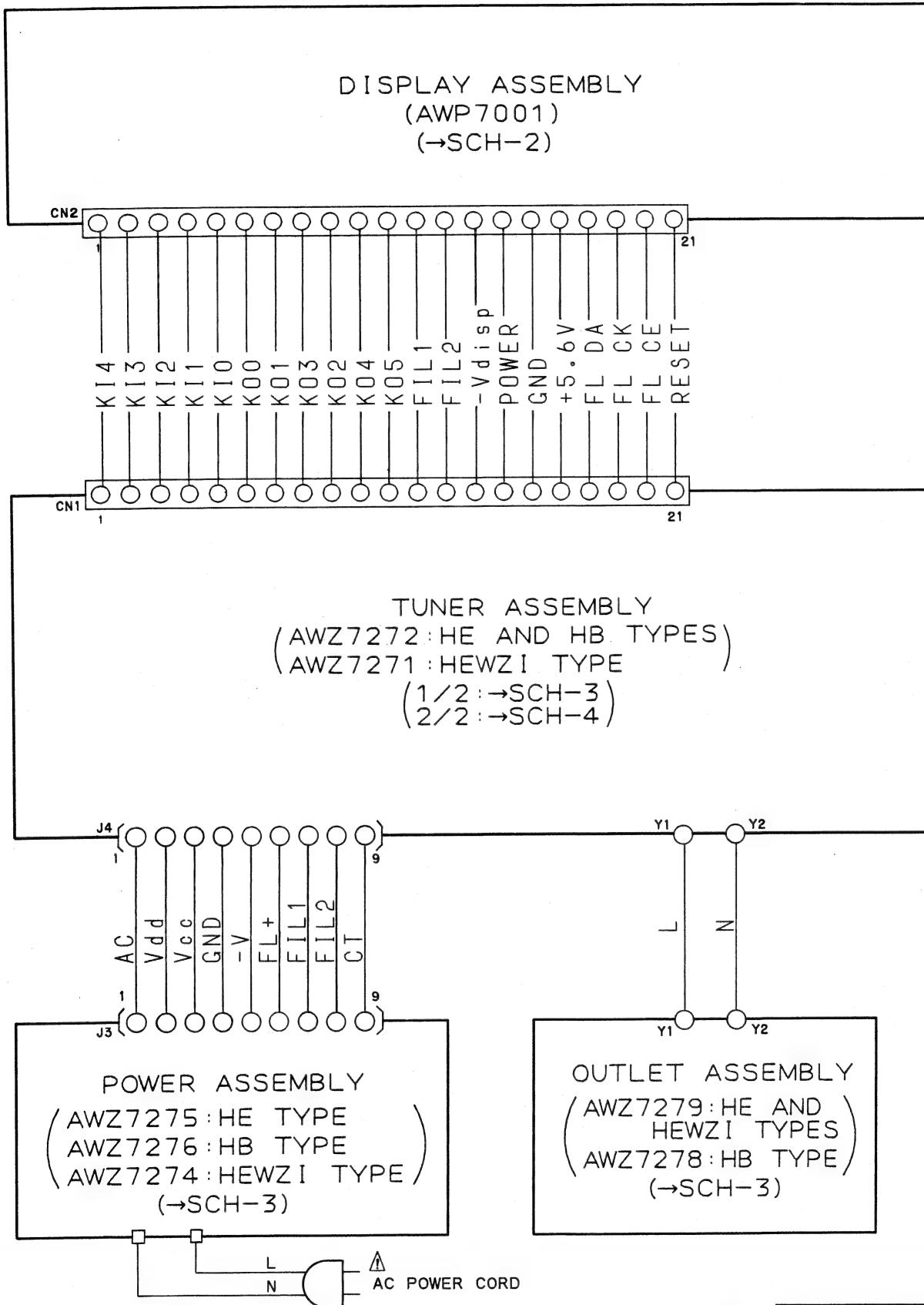
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

3. The transistor terminal marked with E or shows the emitter.
4. The diode terminal marked with or shows cathode side.
5. The capacitor terminal marked with or shows negative terminal.

4.1 OVERALL WIRING DIAGRAM

SCH-1

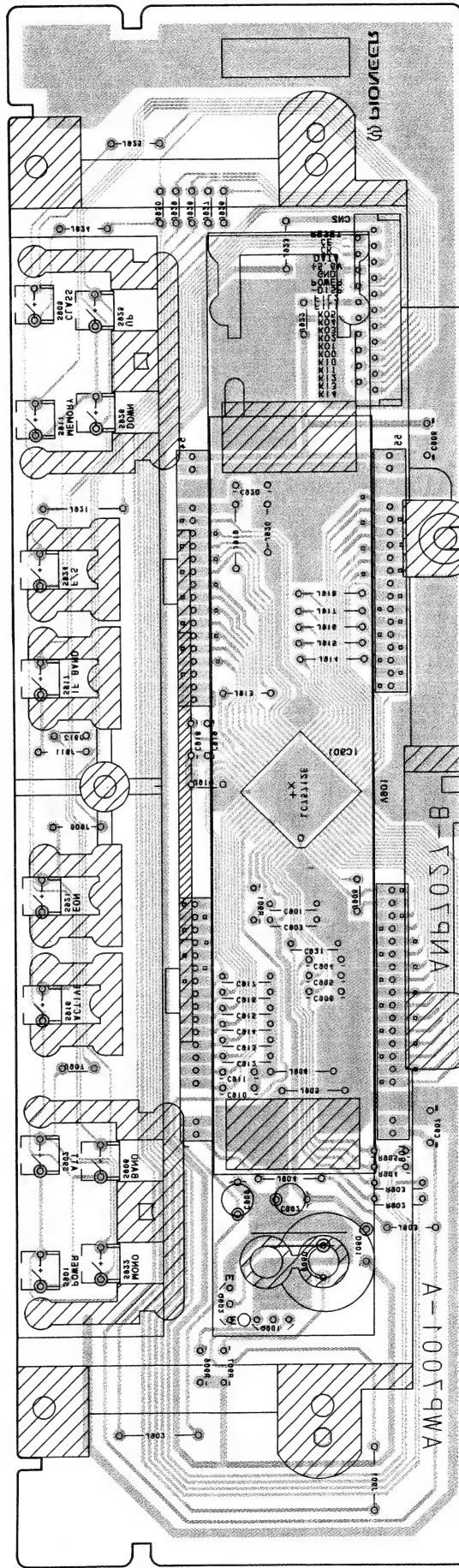


OVERALL

SCH-1

4.2 DISPLAY ASSEMBLY

- This diagram is viewed from the foil side.



DISPLAY ASSEMBLY

A

8

8

2

3

S

9

4.2 DISPLAY ASSEMBLY

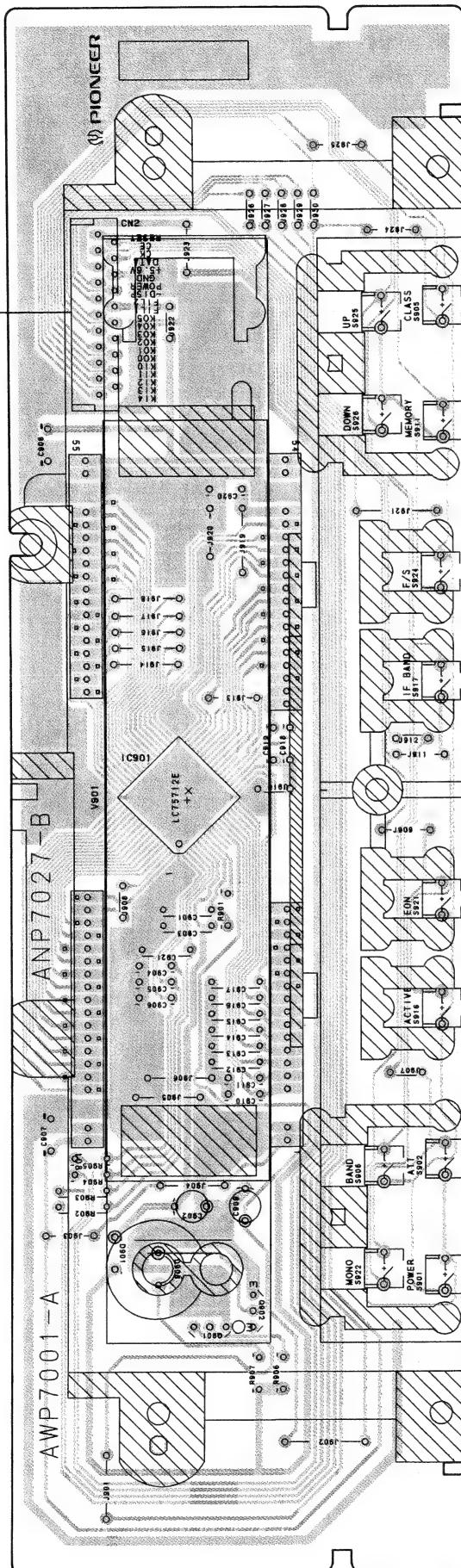
- This diagram is viewed from the mounted parts side.

DISPLAY ASSEMBLY

A

TO TUNER ASSEMBLY
CN1

A



PCB-1

B

IC901

G

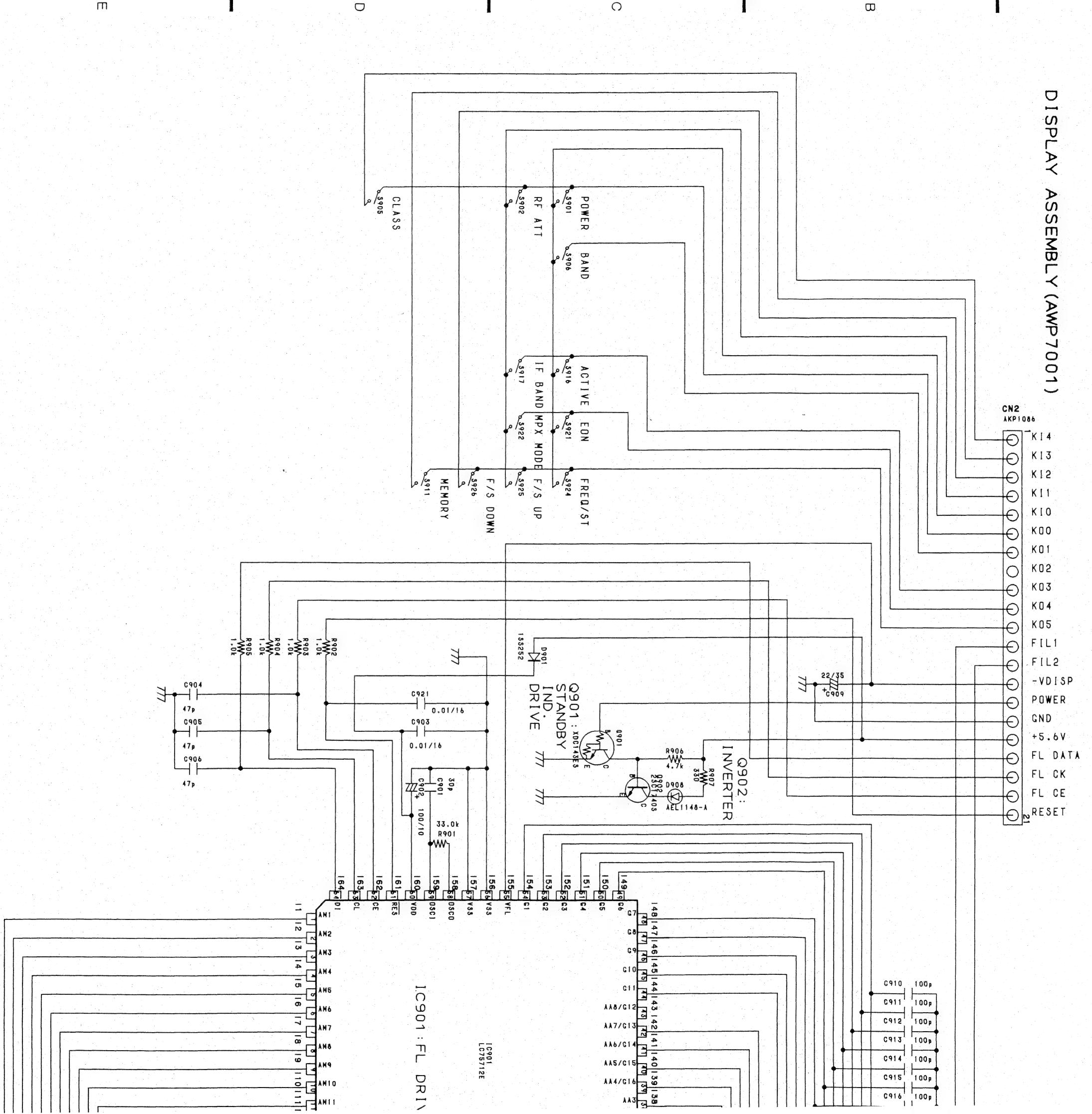
Q902
Q901

D

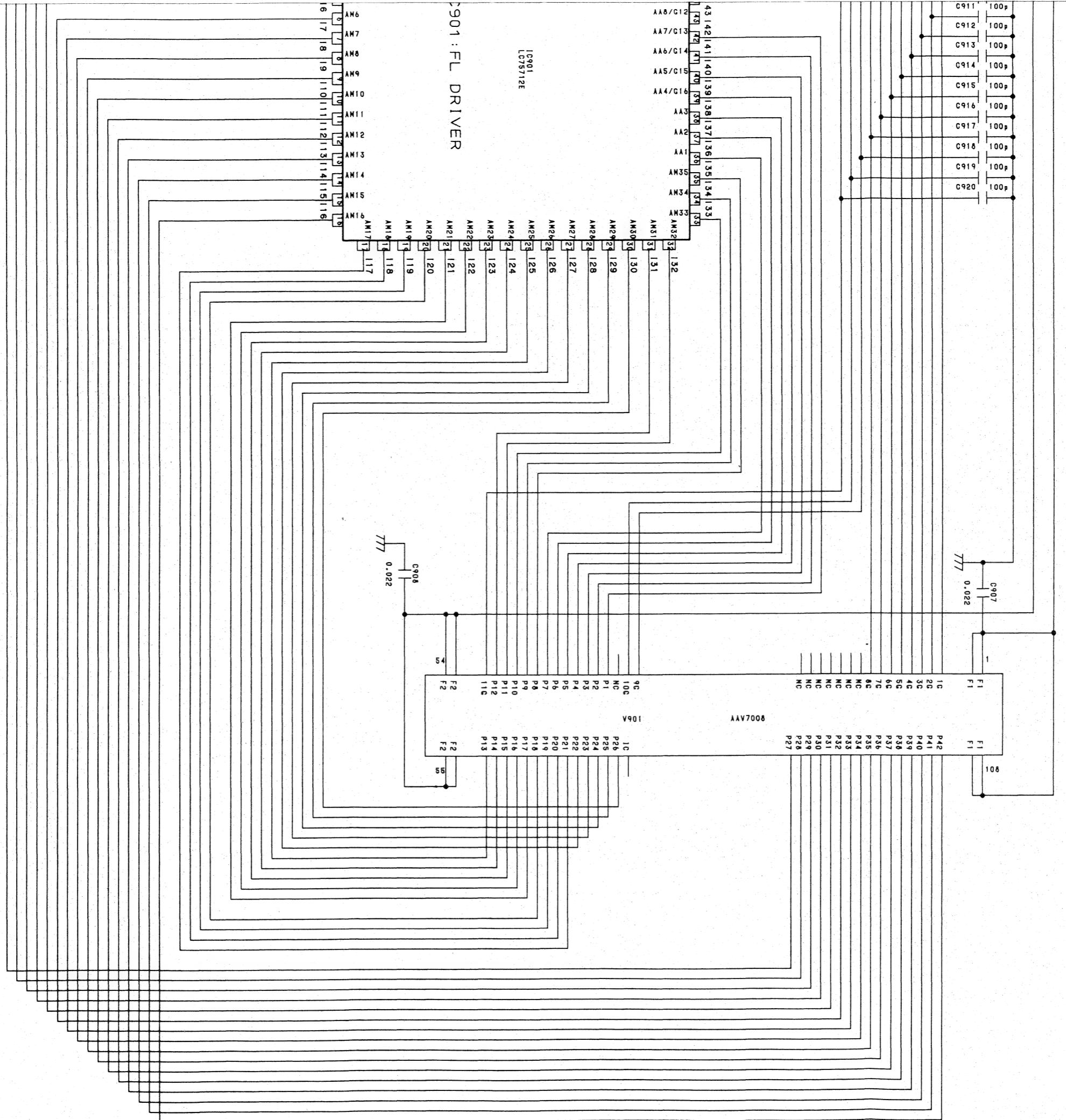
1

DISPLAY ASSEMBLY (AWP7001)

TO TUNER ASSEMBLY (2/2) CN1 (\rightarrow SCH-4)

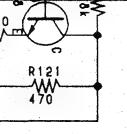


SCH-2

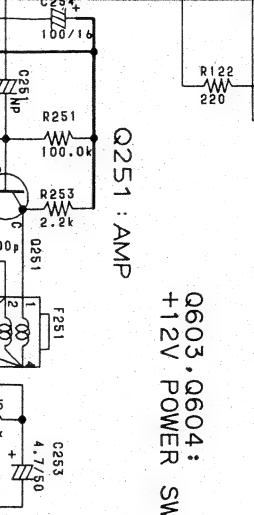


SCH-3

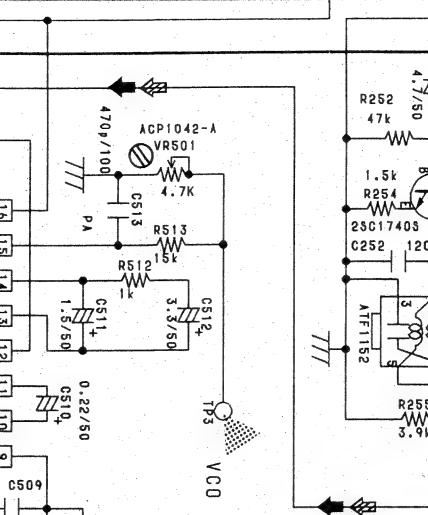
TO TUNER ASSEMBLY (2/2) (→SCH-4)

FM Signal route(Lch)
AM Signal route(Rch)IC602:
+12V REGULATORQ608:
+5.6V REGULATORPOWER ASSEMBLY
(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

(AWZ7274 : HEWZI TYPE)

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

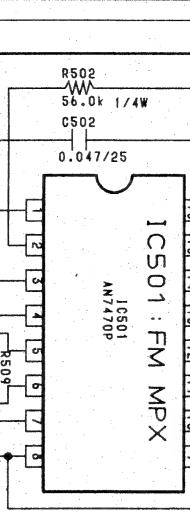
(AWZ7274 : HEWZI TYPE)



Q251 : AMP

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

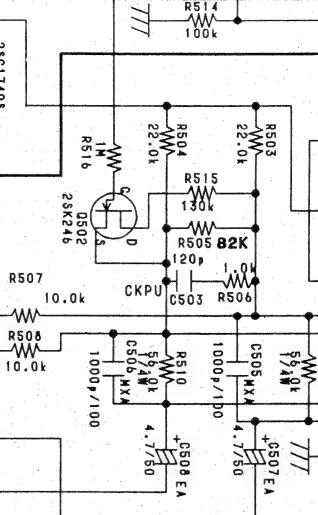
(AWZ7274 : HEWZI TYPE)



IC501 : FM MPX

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

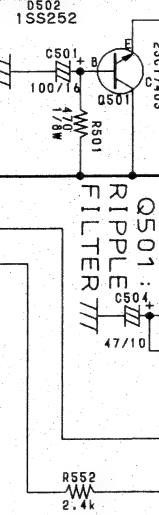
(AWZ7274 : HEWZI TYPE)



Q501 : RIPPLE FILTER

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

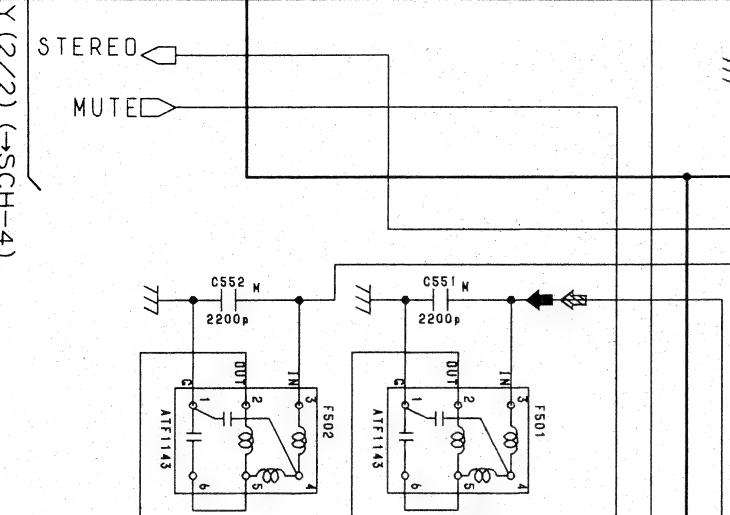
(AWZ7274 : HEWZI TYPE)



IC502 : AMP

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

(AWZ7274 : HEWZI TYPE)



STEREO MUTE

Q603, Q604:
+12V POWER SWQ606, Q607:
FL POWER SWQ605:
-30V REGULATORQ601:
AC SOCKET 1-P
AKP1034;HE AND
HEWZI TYPESQ602:
FL POWER SW
4.7kQ603:
AC
VddQ604:
VccQ605:
GNDQ606:
-VQ607:
FL1Q608:
FL2Q609:
CTQ610:
INTQ611:
FIL1Q612:
FIL2Q613:
POWER ASSMBLY(AWZ7275 : HE TYPE)
(AWZ7276 : HB TYPE)

(AWZ7274 : HEWZI TYPE)

Y (2/2) (→SCH-4)

TO TUNER ASSEMBLY (2/2) (→SCH-4)

* R559, R560
22K : HE AND HB TYPES
4.7K : HEWZI TYPE

X

R557, R568
1.2K : HE AND HB TYPES
2.70 : HEWZI TYPE

X

R567, R568
1.2K : HE AND HB TYPES
2.70 : HEWZI TYPE

X

R569, R570
1.0K : HE AND HB TYPES
1.50 : HEWZI TYPE

X

R571, R572
1.0K : HE AND HB TYPES
1.50 : HEWZI TYPE

X

R573, R574
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R575, R576
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R577, R578
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R579, R580
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R581, R582
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R583, R584
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R585, R586
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R587, R588
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R589, R590
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R591, R592
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R593, R594
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R595, R596
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R597, R598
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R599, R600
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R601, R602
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R603, R604
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R605, R606
2.2K : HE AND HB TYPES
3.0K : HEWZI TYPE

X

R607, R608
2.2K

Line Voltage Selection

Line Voltage can be changed by the following modification:

1. Disconnect the AC power cord.
2. Remove the cover.
3. Change the position of the jumper-lines A follows.

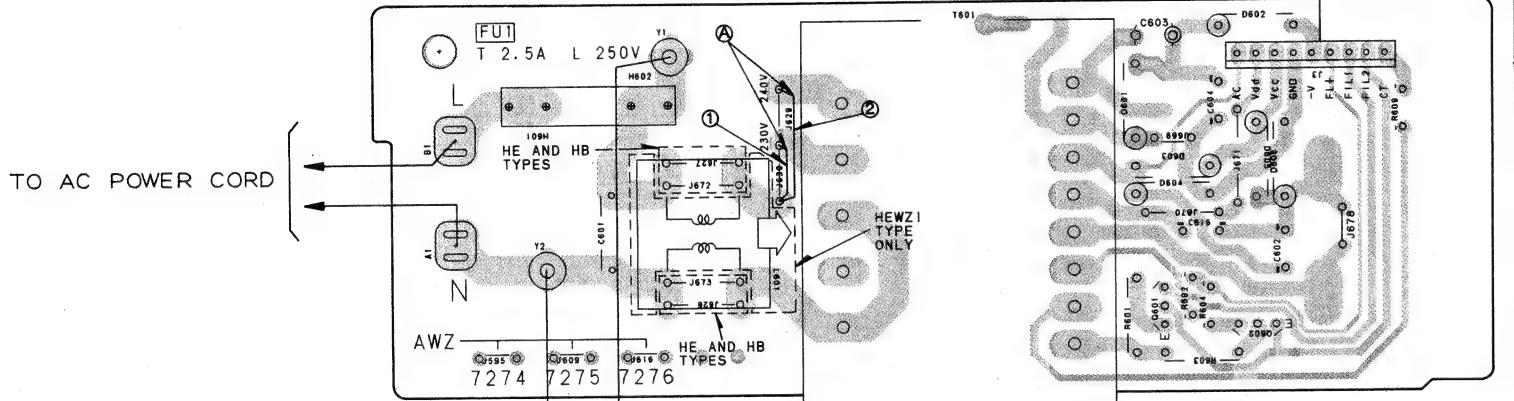
Voltage	jumper-line A position
220V-230V	①
240V	②

NOTE: When replacing a PCB which has the primary winding circuit of Power-transformer, be sure to compare its circuit with the diagram in Service Manual.
jumper-lines on the PCB may have to be removed.
Forgetting this check-up will cause a serious damage.

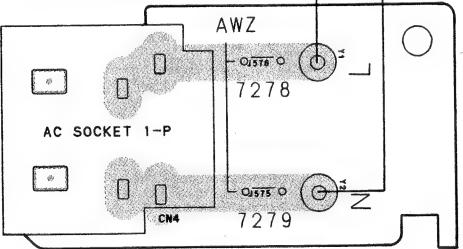
4. Stick a line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

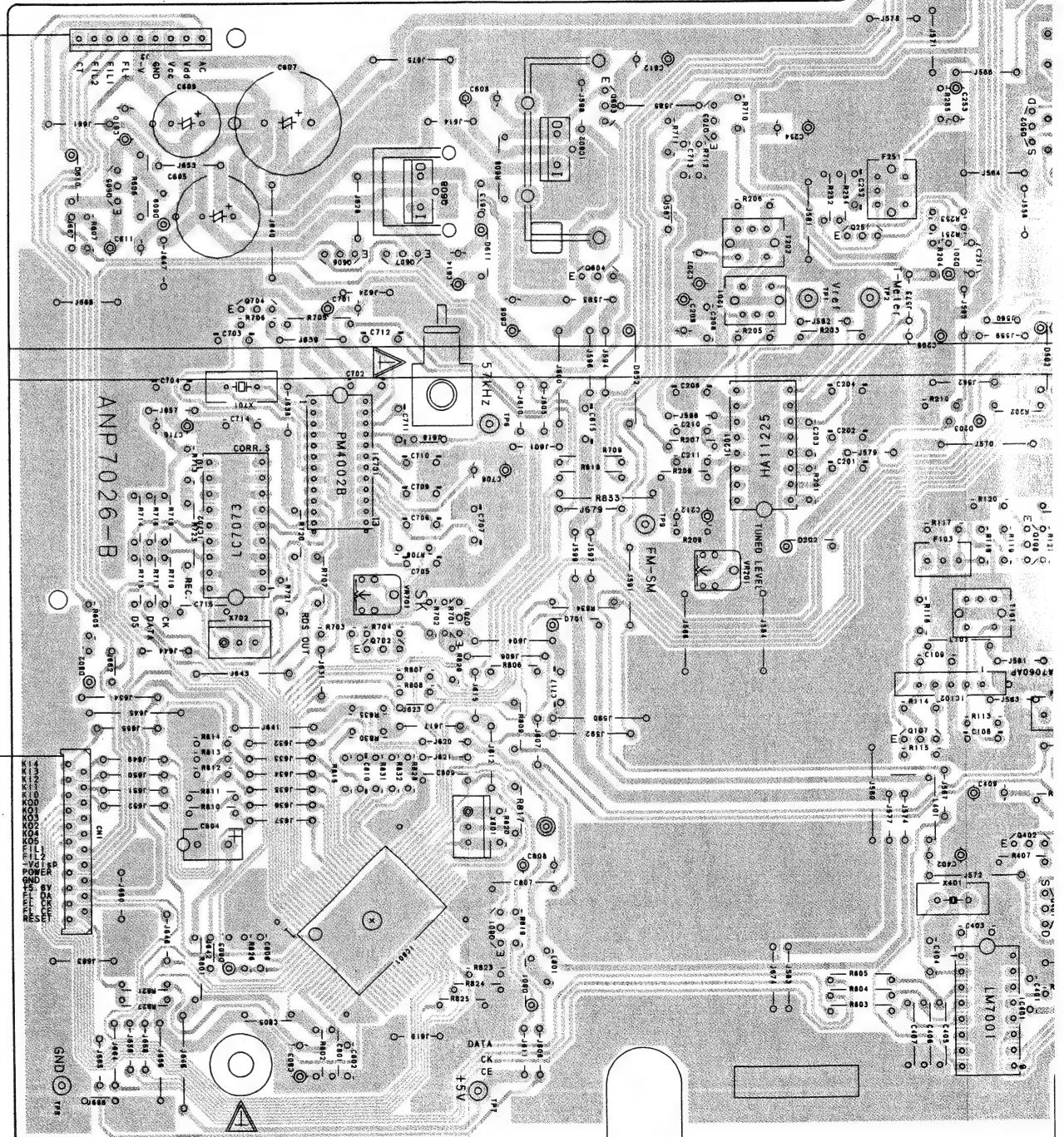
POWER ASSEMBLY



OUTLET ASSEMBLY



TO DISPLAY ASSEMBLY
CN2

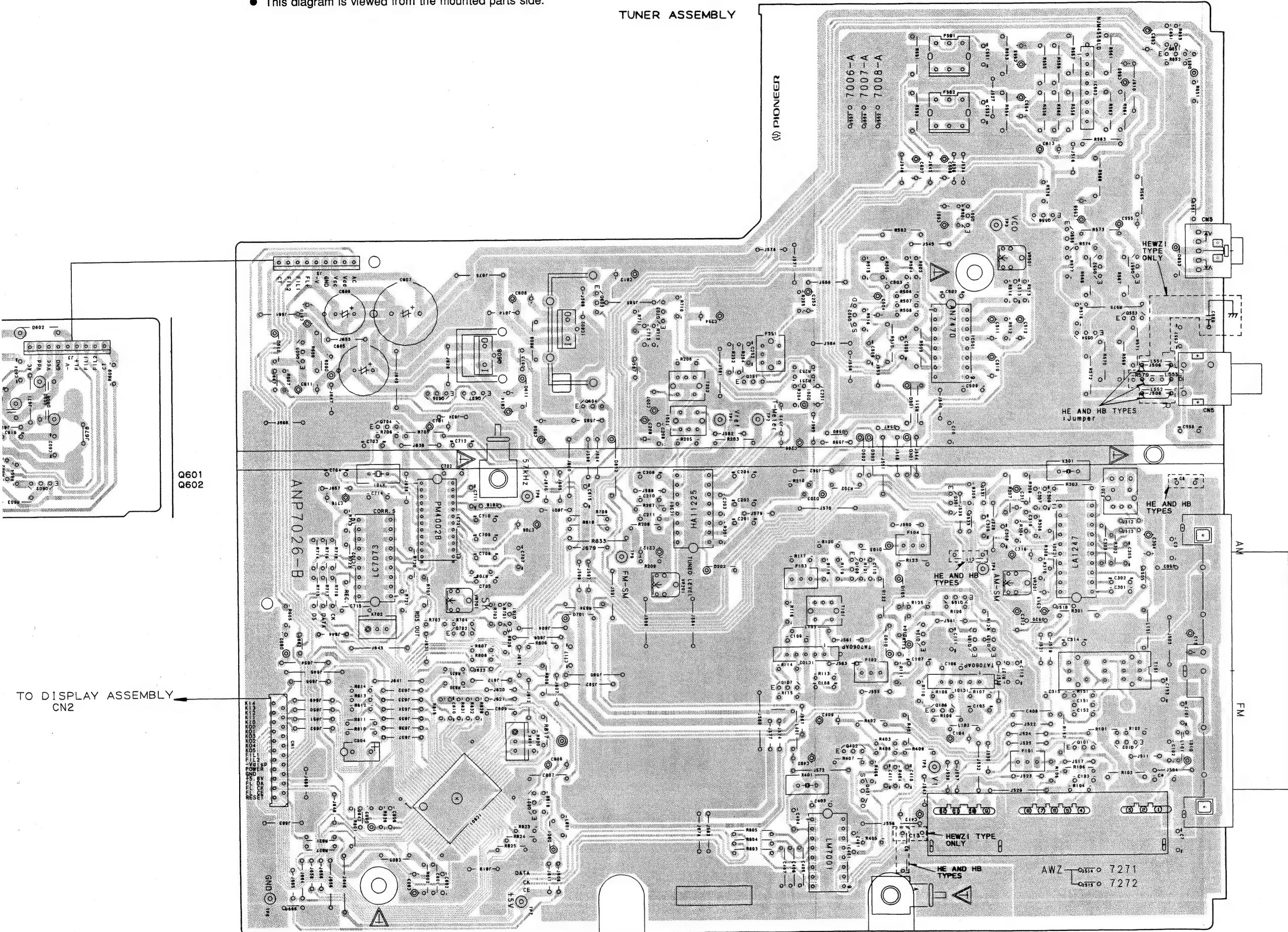


● This diagram is viewed from the mounted parts side.

TUNER ASSEMBLY

● This diagram is viewed from the mounted parts side.

TUNER ASSEMBLY



PCB-2

Q851

IC502

A

Q501
Q556

Q555

Q552

Q551

Q603

Q703

Q502

IC602

Q553

Q554

IC501

Q605

Q608

B

Q251
Q606
Q604
Q704

Q607

IC701
IC201
Q301IC301
IC702

Q108

Q109

Q701

Q702 Q104
Q105 Q103
IC102

C

Q107 IC101

Q106

Q101 Q102
Q402IC801
Q401
Q801

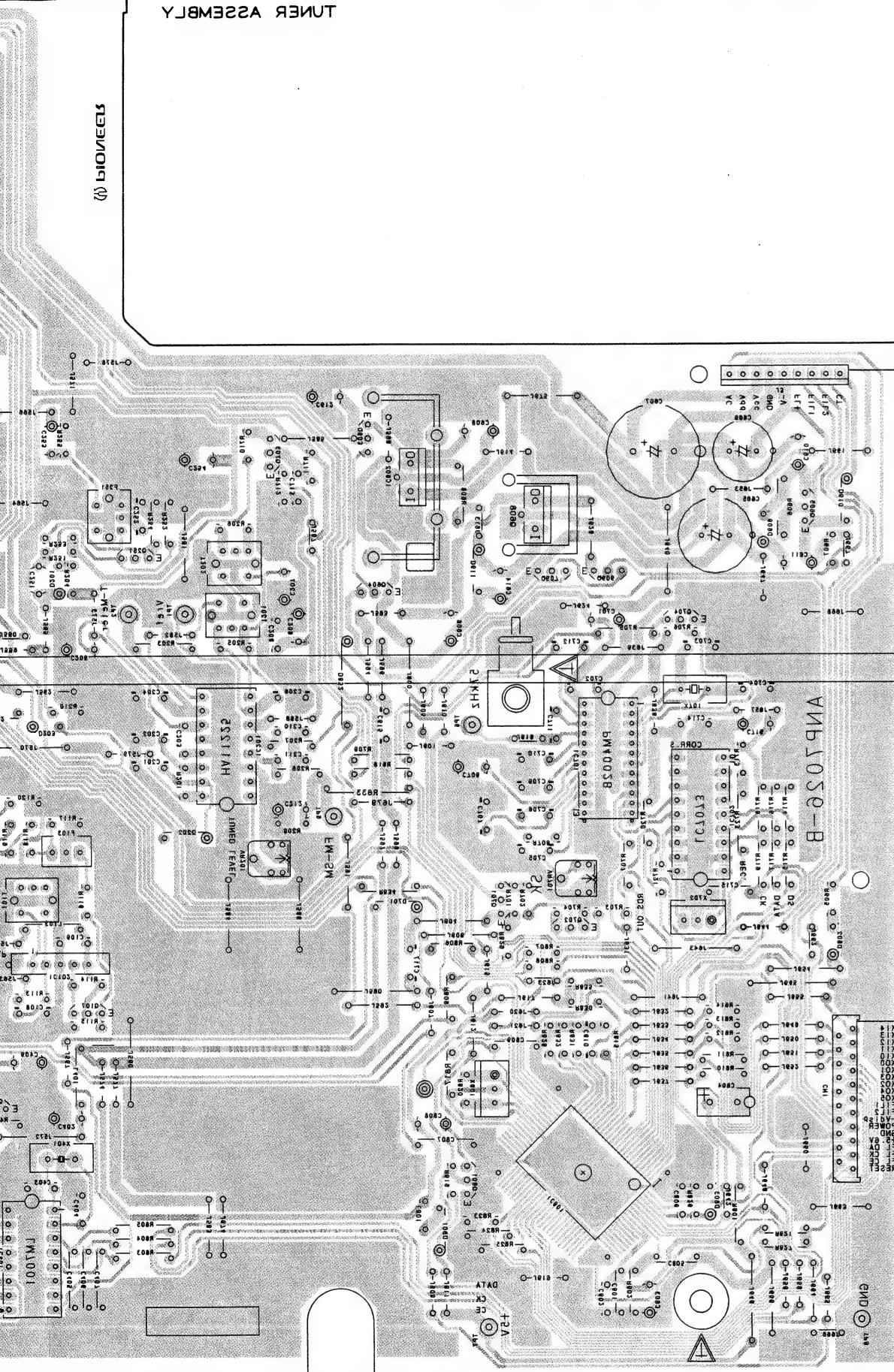
D

IC401

19

- This diagram is viewed from the foil side.

TUNER ASSEMBLY



10a
soa

CNS-LO DISPLAY ASSEMBLY

0

卷之三

This diagram illustrates the exploded view of an outlet assembly. It features a main rectangular component labeled 'OUTLET ASSEMBLY' at the top. To its left is a circular component labeled '7578'. Below it is another circular component labeled '7579'. To the right of the main rectangle is a vertical component labeled '7580'. At the bottom right is a smaller component labeled '7581'. The labels 'AC SOCKET 1-b' and 'GND' are also present near the bottom right.

8

TUNER ASSY

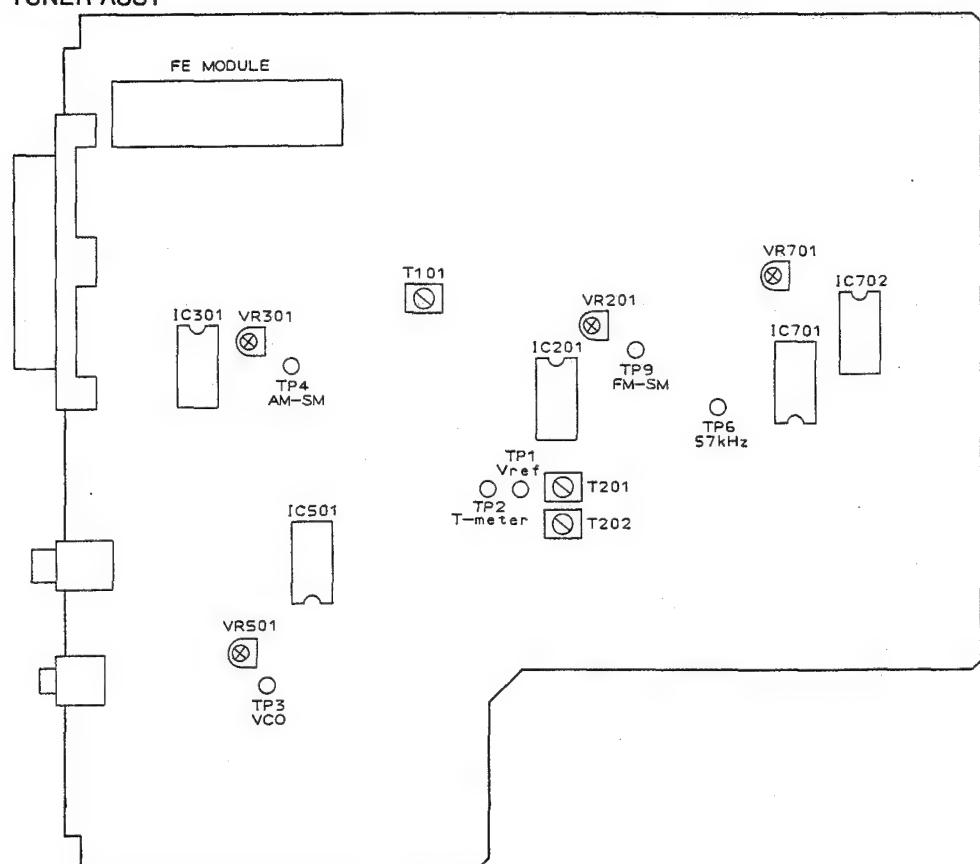


Fig. 1 Adjustment Points

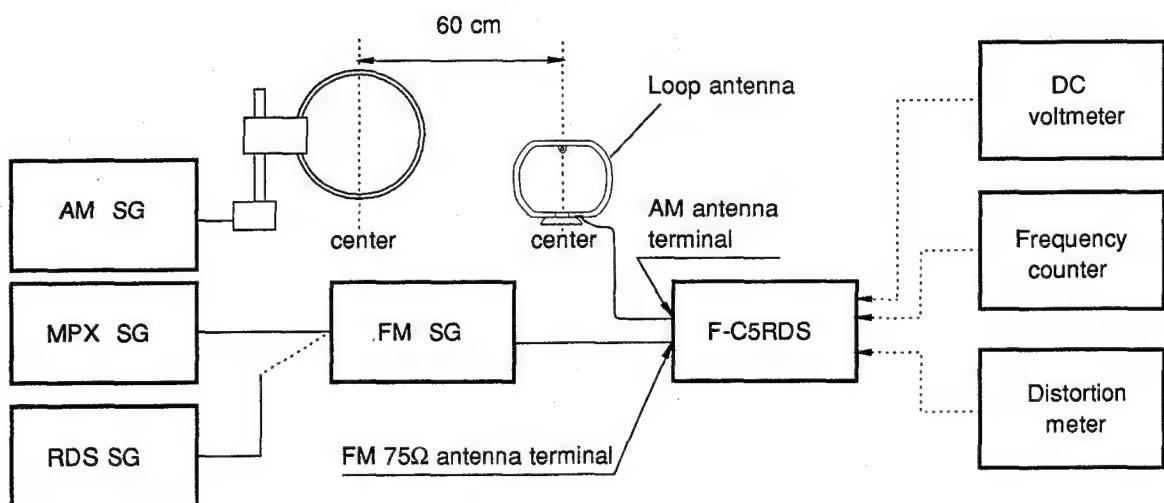


Fig. 2 Connection Diagram

7. FOR HB AND HEWZI TYPES

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

F-C5RDS/HB, HEWZI and F-C5RDS/HE have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		F-C5RDS/HE	F-C5RDS/HB	F-C5RDS/HEWZI	
Δ	TUNER assembly	AWE7007	AWE7008	AWE7006	
	TUNER assembly	AWZ7272	AWZ7272	AWZ7271	
	POWER assembly	AWZ7275	AWZ7276	AWZ7274	
	OUTLET assembly	AWZ7279	AWZ7278	AWZ7279	
	AC power cord	ADG1049	ADG1103	ADG1049	
	Rear panel	ANC7095	ANC7096	ANC7094	
	Ferrite core	.....	.....	ATX7001	*
	Screw	.....	.....	ABA1047	*
	Operating instructions (English/German/French/Italian/ Swedish/Dutch/Spanish/Portuguese)	ARE7015	.....	.....
	Operating instructions (English)	.....	ARB7014	.....
	Operating instructions (German/Italian)	.....	.....	ARC7022	
	FM antenna	ADH1005	ADH1005	ADH1002	
	Plate (GND)	.....	.....	ANK1120	*

* : Refer to page4.

TUNER ASSEMBLY

AWZ7271 and AWZ7272 have the same construction except for the following:

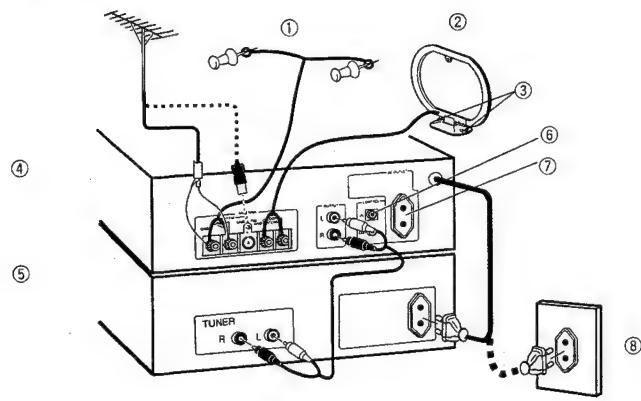
Mark	Symbol & Description	Part No.		Remarks
		AWZ7272	AWZ7271	
	R559,R560	RDR1/4PM223J	RDR1/4PM472J	
	R567,R568	RDR1/4PM122J	RDR1/4PM271J	
	R579	.....	RD1/8PM010J	
	C6	CKPUYB101K50	.....
	C7	CKDYX223M25	CKDYX103M25	
	C8	CKDYX223M25	.....
	C10	CKPUYB102K50	CKDYB102K50	
	C11	CKPUYY103M16	.....
	C12	CKDYB102K50	CKDYB272K50	
	C13	.....	CKPUYB101K50	
	C557,C558	CKDYB471K50	CKDYB103K50	
	C559	.....	CKDYB102K50	
	L551,L552	.....	LAU2R2K	
	L553	.....	LAU010K	
	Antenna terminal 4-P	AKA1010	.....
	Antenna terminal 2-P	.....	AKA1012	

POWER ASSEMBLY**AWZ7276, AWZ7274 and AWZ7275 have the same construction except for the following:**

Mark	Symbol & Description	Part No.			Remarks
		AWZ7275	AWZ7276	AWZ7274	
△	L601	.....	.....	ATF1135	

OUTLET ASSEMBLY**AWZ7278 and AWZ7279 have the same construction except for the following:**

Mark	Symbol & Description	Part No.		Remarks
		AWZ7279	AWZ7278	
△	AC socket 1-P	AKP1034	AKP1035	

8. CONNECTIONS**⑥ Control jack****⑦ AC outlet****1. Connecting the accessory FM T-type antenna and AM loop antenna.**

Twist the vinyl covering on the end of the wire to remove the covering.



Unscrew the connector and twist the antenna wire around the shaft.



Tighten securely.

- This antenna provides a simple means of receiving FM broadcasts. For better reception, however, you may wish to use a special outdoor FM antenna.

- Do not mount the AM loop antenna on the metal case of this or other components, or near a CD player, personal computer, or television.

2. Use the accessory audio cables to connect the color-coded connectors.

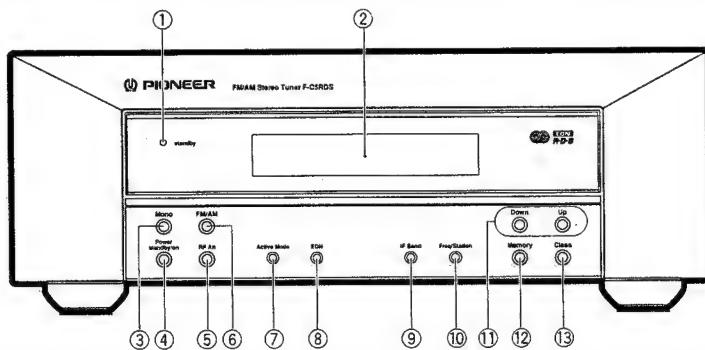
(connect Red to the Right channel and White to the Left channel).

① FM T-type antenna (accessory)

- Use thumb tacks or push pins to fasten antenna wires to a wall.
- Fasten the antenna wires on a wall, not allowing the wires to droop or bunch up.

② AM loop antenna (accessory)**③ Use these holes if necessary to mount antenna on a post or wall.****④ F-C5RDS****⑤ Stereo amplifier**

9. PANEL FACILITIES



① Standby indicator

Goes out when power is turned on; lights when power is set to standby.

② Display section

③ Mono button

④ Power standby/on switch

This is the switch for electric power.

on: When set to the on position, power is supplied and the unit becomes operational.

standby: When set to the standby position, the main power flow is cut and the unit is no longer fully operational.

A minute flow of power feeds the unit to maintain operation readiness. When the Standby indicator lights, the unit is in STANDBY.

⑤ RF Att button

Press this RF attenuator button if the excessive strength of FM signals results in distortion. The RF ATT indicator will light in the display section.

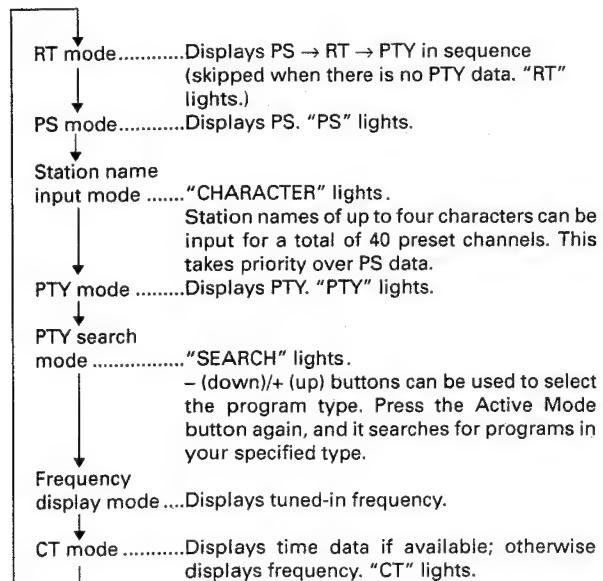
- This function does not operate during AM broadcasts.

⑥ FM/AM button

⑦ Active Mode button

Each time you press this button, the mode changes as follows:

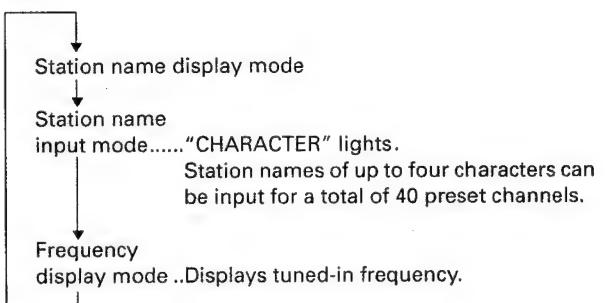
FM:



NOTE:

The station name input mode and PTY search mode are skipped when the EON function is used for interrupt waiting.

AM:



⑧ EON button

If receiving a station broadcasting EON information, the radio can automatically keep track of broadcast information from other network stations. If you specify traffic information (TA) or program type (PTY) beforehand, the frequency will change automatically when the specified broadcast begins.

The display's EON indicator lights when receiving a station broadcasting EON information.

⑨ IF Band button

Each time this button is pressed, the bandwidth of the IF circuit switches between "normal" and "narrow" for the FM band. The NARROW indicator lights up. When not lit, normal filter bandwidth is selected.

Set to NARROW in case of interference from other stations. This button does not affect AM reception.

NOTE:

This button's status is preset for each station in station memory.

⑩ Freq/Station button

⑪ Tuning Up+ Down- button

Use to tune broadcast stations.

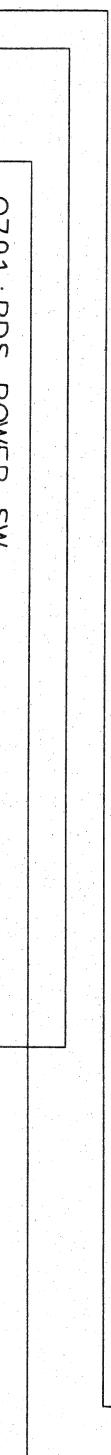
⑫ Memory button

⑬ Class button

Use to switch between preset memory classes 1 to 4. In each class, 10 stations can be memorized using the "+"/ "-" buttons, enabling a total of 40 stations to be memorized.

**TUNER ASSEMBLY (2/2) (AWZ7272 : HE AND HB TYPES)
(AWZ7271 : HEWZ1 TYPE)**

FM.COMP
+12V



Q701 : RDS POWER SW
IC701 : RDS DETECTOR

RDS

RDS

TUNE

DATA

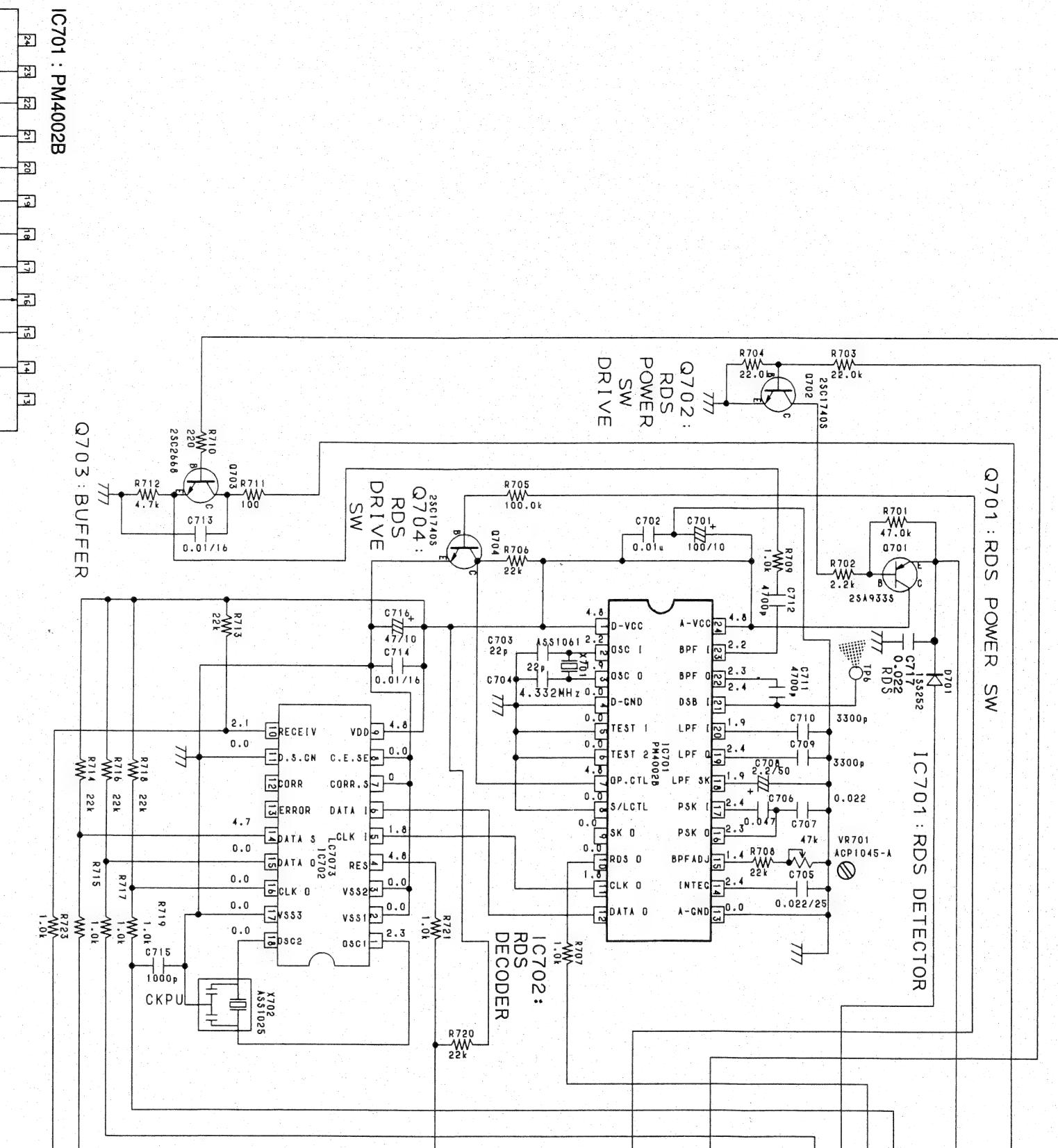
RESE

FM+

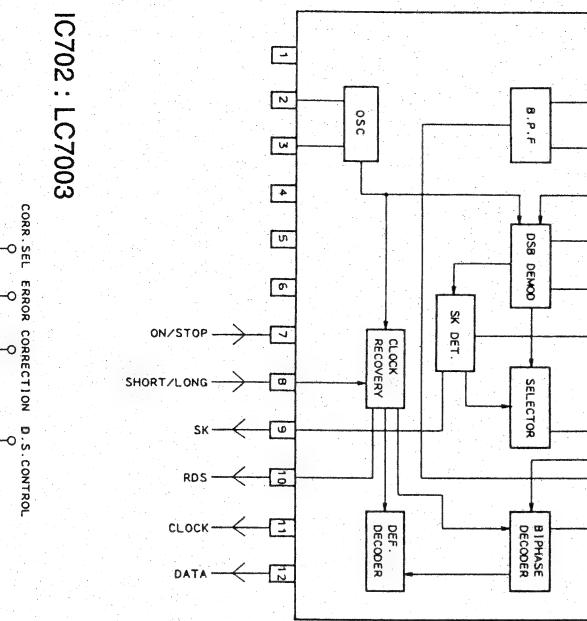
Q702 :
RDS
POWER
SW
DRIVE

Q703 : BUFFER

Q704 :
RDS
DRIVE



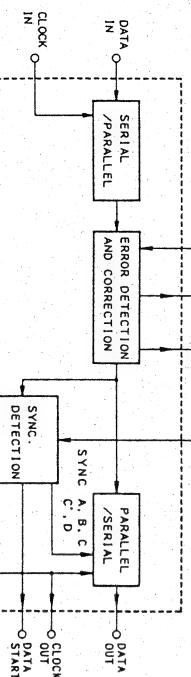
IC701 : PM4002B



IC702 : LC7003

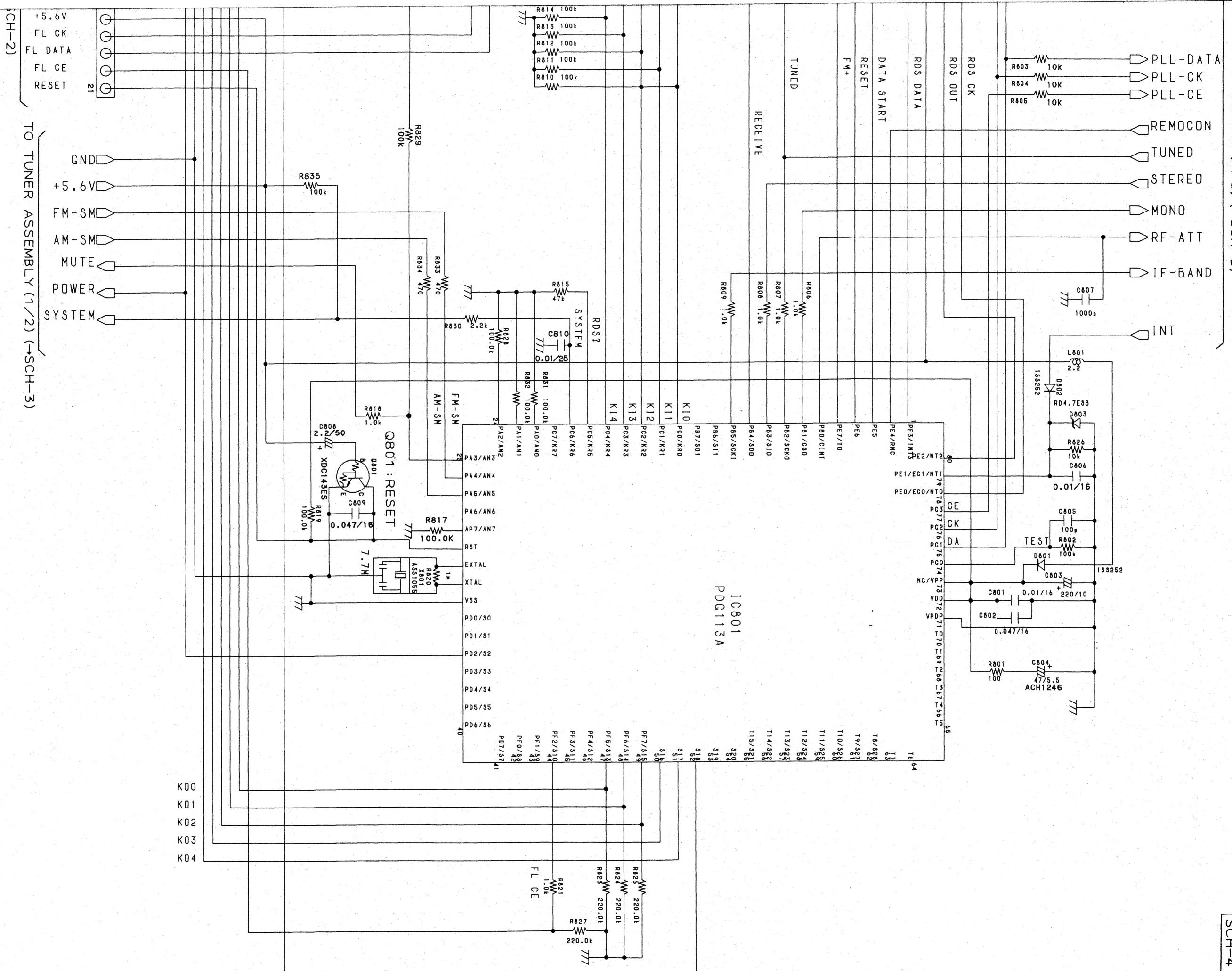
TO TUNER ASSEMBLY (1/2) (\rightarrow SCH-3)

TO DISPLAY ASSEMBLY CN2 (\rightarrow SCH-2)



IC701 : PM4002B

TUNER ASSEMBLY (1/2) (→SCH-3)



TUNER ASSY (2/2)

SCH-4

5. PCB PARTS LIST

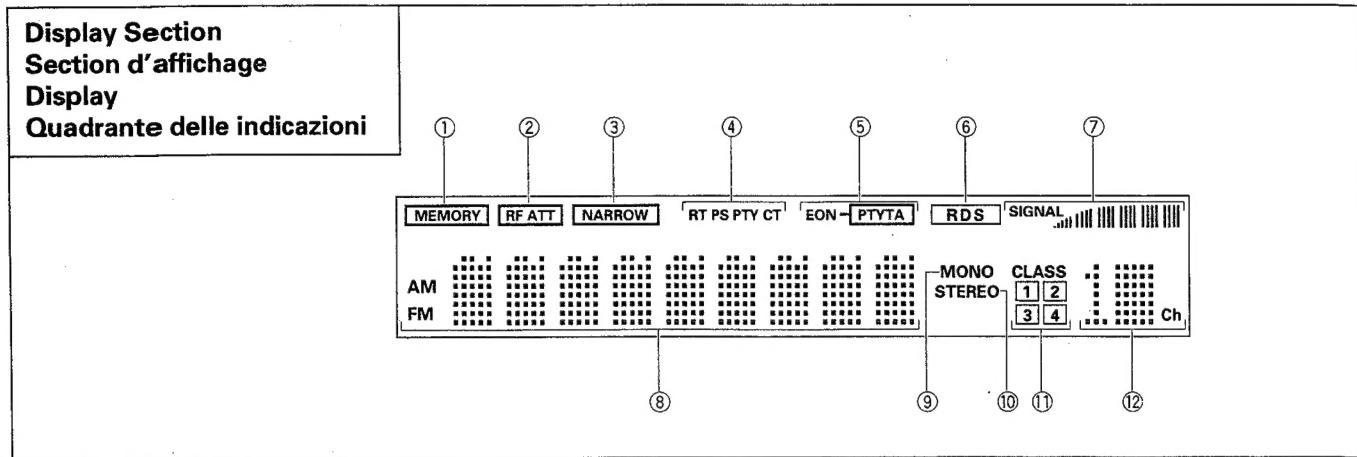
● Pan
The

● Pan
The

- The **Δ** mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - Parts marked by “**◎**” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.

1522

				5.62kΩ → 562 × 10 ³ → 5621	..... RN14PC 56211F
LIST OF ASSEMBLIES						
TUNER ASSEMBLY	AWE7007 AWZ7272 AWZ7275 AWZ7279	D609 D803 D610 D853 D611	RD30ESB2 RD4.7ESB RD5.1ESB1 RD6.2ESB3	C711,C712 C101,C102,C107,C305,C411 C810 C152,C615 C111,C112,C153,C201,C202	CKDYX473M25 CKDYX223M25 CKDYX104M25 CKDYX103M25	
POWER ASSEMBLY					CKDYX223M25	
OUTLET ASSEMBLY					CKDYX473M25 CKDYX473M25	
DISPLAY ASSEMBLY	AWP7001	IC501 IC201 IC301 IC702 IC401	ATE-063 ATE1008 ATE1009 ATE-107 ATE-119	C10,C3,C301,C307,C4 C715,C807 C503 C203 C802,C809	CKPUYB102K50 CKPUYB102K50 CKPUYB12K50 CKPUYB22K50 CKPUYF473Z16	
TUNER ASSEMBLY	AN7470P HA11225 LA1247 LC7073 LM7001J	F102 F201 F103,F104 F101	ATF1024 ATF1042 ATF1143 ATF1152	C103,C106,C109,C11,C110 C208,C211,C303,C310,C401 C408,C509,C702,C713,C714	CKPUYY103M16 CKPUYY103M16 CKPUYY103M16 CKPUYY103M16	
SEMICONDUCTORS	IC502 IC602 IC801 IC701 IC101,IC102	NJM7812AS PDG113A PM4002B TA7060A/P	L151	C551,C552 C505,C506 C513	CQMXA1021100 CQPA471J100	
COILS AND FILTERS	CT03,CT04 C151,C403,C404 C315,C405-C407 C412	CCDCB220150 CCPUCIH150150 CCPUSL470J50 CEANL010M50	ACH1246 R606 R103,R608 R307	RD12/PM471J RD12/PM821J RD14/PM151J RD14/PM331J R571,R572	CKDYX104M25 CKDYX103M25	
CAPACITORS	Q0101,Q0603 Q555,Q701 Q605 Q102,Q109,Q251,Q501 Q551-Q554,Q556,Q702,Q704	2SA1529 2SA933S 2SB560 2SC1740S 2SC1740S	C251 C205 C312 C606,C701 C501	R301 R555,R556 R567,R568 R561,R562 R559,R560 R551,R552	CKDYX104M25 CKDYX103M25	
RESISTORS	Q851 Q402 Q106-Q108,Q703 Q608 Q401,Q502	2SC1740S 2SC1740SLN 2SC2668 2SD880 2SK246	C611 C605 C511 Q103,Q105,Q606 Q104,Q607 Q604,Q801 D201-D203,D301,D302	CEAS101M35 CEAS102M25 CEAS101M16 CEAS101M16 CEAS12M50 CEAS12M50 CEAS221M10 CEAS2R2M50	RDR1/4PM104J RDR1/4PM122J RDR1/4PM223J RDR1/4PM242J RDR1/4PM271J RDR1/4PM472J RDR1/4PM562J RDR1/4PM563J ACP1042	CKDYX104M25 CKDYX103M25
Q301	XDA12AES XDC12AES XDC143ES	1SS252	C104,C209,C304,C311,C402	R565,R566 R557,R558 R553,R554,R569,R570 R502,R509,R510 VR301 (4.7k)	CKDYX104M25 CKDYX103M25	
D501,D502,D701,D801,D802	D851	1SS252 1SS25 1SS85 1SV156	C409 C609 C512 C504,C716,C852	VR301 (10k) VR201 (22k) VR701 (47k)	CKDYX104M25 CKDYX103M25	
D102-D105	D101				CKDYX104M25 CKDYX103M25	
D952					CKDYX104M25 CKDYX103M25	



① MEMORY indicator

② RF ATT indicator

Stays lit while RF Att button is on.

③ NARROW indicator

Stays lit while IF Band button is set to NARROW.
When not lit, stays NORMAL.

④ RT, PS, PTY, CT indicator

One of these lights to indicate the selected display mode (selected by the Active Mode button).
Time is displayed when the CT data is received. It switches to frequency mode display if not lit.

⑤ EON -PTY TA indicator

When a station broadcasting EON information is received, EON — [] lights. After specifying TA or PTY, interrupt waiting begins and the TA or PTY indicator lights. When specified TA or PTY is received, TA or PTY flashes.

⑥ RDS indicator

Lights when an RDS broadcast is received.

⑦ SIGNAL indicator

⑧ Frequency, character, clock time indicator

CT (Clock Time) data, band RDS data and frequency data are displayed.

⑨ MONO indicator

Stays lit while Mono button is set to MONO.

⑩ STEREO indicator

Lights up when a stereo broadcast is received (the indicator does not light when the Mono button is set to MONO).

⑪ CLASS ①, ②, ③, ④ indicator

Shows the class selected by the Class button.
The current CLASS is displayed.

⑫ Station indicator

When Freq/Station button is pressed, it will show the corresponding channel number.

10. SPECIFICATIONS

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity (IHF)	12.7 dBf (1.2 μ V/75 Ω)
50 dB Quieting Sensitivity	Mono; 18 dBf (2.2 μ V/75 Ω) Stereo; 38.3 dBf (22.6 μ V/75 Ω)
Sensitivity (DIN)	Mono; 1.0 μ V/75 Ω Stereo; 35 μ V/75 Ω
Signal-to-Noise Ratio	Mono; 78 dB (at 85 dBf) Stereo; 74 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN)	Mono; 62 dB Stereo; 60 dB
Distortion	0.3 % (1 kHz)
Alternate Channel Selectivity	65 dB (300 kHz)
Stereo Separation	40 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz \pm 1 dB
Image Response Ratio	80 dB
IF Response Ratio	90 dB
Antenna Input	75 Ω unbalanced
Output	650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range	531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna)	350 μ V/m
Selectivity	30 dB
Signal-to Noise Ratio	50 dB
Antenna	Loop Antenna
Output	150 mV (30 % MOD.)

Miscellaneous

Power Requirements	AC220—230 Volts ~, 50/60 Hz
Power Consumption	16 W
Dimensions	260 (W) x 95.5 (H) x 336 (D) mm
Weight (without package)	2.4 kg

Furnished Parts

FM T-type Antenna	1
AM Loop Antenna	1
Audio connection cable with Pin Plugs	1
Operating Instructions	1
Control cable	1

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.